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conservation of Modern Movement architecture.



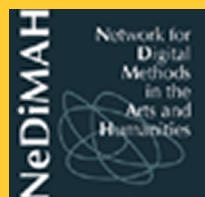
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the chair of the National Architecture Biennale in
Romania, when also the itinerary exhibition on
Romanian architects creators of cultural heritage
started, focusing on the 20th century.

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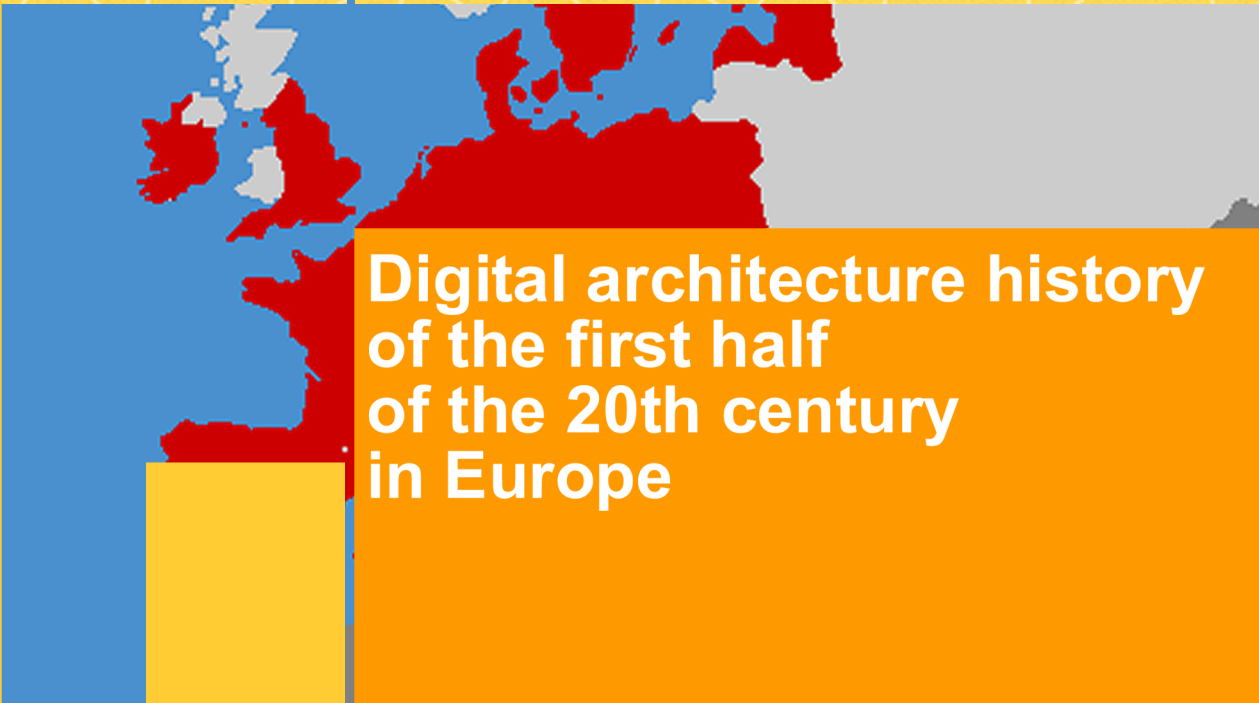
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Centre for Architectural and Urban Studies
"Ion Mincu" University of Architecture and Urbanism

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Alex DILL
Cristina Olga GOCIMAN



Digital architecture history of the first half of the 20th century in Europe



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Maria Bostenaru Dan

Alex Dill

Cristina Olga Gociman

“Ion Mincu” Publishing House
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- 1983-89 project architect in the office of Mitschler Architekten, Mannheim, Novotny+Mähner Architekten, Frankfurt, Bucschmann Architekten, Offenbach
- 1984 member in the “Chamber of Architects Hessen”
- 1989-92 founding of own office for Architecture+Design in Darmstadt
- 1992 teaching assistant professor at Faculty of Architecture, TU Karlsruhe / Institute of Building Design / Prof. Rüdiger Kramm
- main research: contemporary architecture in France and in Germany
- 1996 member “Atelier Europeen – Technologie de l’Architecture”
- 2002 start of the research initiative on German-Russian Avantgarde Architecture “The architectural heritage of the 20th century – exhibitions and symposia, International conferences, expositions, excursions, workshops, contributions to current building research and refurbishment practice
- 2002 visiting professor at the University of Bologna
- 2004 visiting professor at the University of Moscow / MARCHI
- 2004 member of “docomomo International”
- Since 2006 board management of “docomomo Germany”
- Since 2007 professorship for the chair “architecture + design”, institute of design, art and theory at the University of Karlsruhe – KIT
- 2006-08 curator for book and exhibition project “Research + Preservation of Modern Movement Buildings”
- 2008 visiting professor at the University of St. Petersburg / St. P. State University
- 2010 member of the “Deutscher Werkbund / Baden Württemberg”
- 2010-12 member of the “THICOM – International Commission of Experts for the Tugendhat House, Brno”
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- Full professor for architectural design, also teaching the course “Protection of settlements against risks”, “Ion Mincu” University of Architecture and Urbanism, scientific secretary (2008-2012), since 2012 president of the professional department of the senate
- Author of numerous articles, essays, architectural chronic, books, interviews and organiser of events
- Journalism award SLAST 1985
- Poetry prize “Alpha 85” – Dacia, Cluj
- Architecture prizes, many of them prize awarded
- Author of urbanism plans and of architectural projects, architecture office S.C. CRIBA DESIGN S.R.L.
- Principal investigator on projects about architecture and urbanism strategies for vulnerability reduction
- Commissioner of the 2012 Romanian National Architecture Biennale
- vice-president of the Bucharest territorial branch of Romanian architects 2001-2010

Abstract

The book proposes a survey of buildings from the first half of the 20th century in Europe. A first article will give an overview of the spread of the buildings from this time in Europe, focusing on a new construction material: the reinforced concrete, on the basis of a chapter from the doctorate thesis of Maria Bostenaru supervised by Cristina Gociman. For the documentation of these, Maria Bostenaru did study trips to investigate the buildings on site in the past 15 years. At the basis of these study trips was the literature review in the field, from which we highlight the references provided by a study seminar at the University of Karlsruhe about architecture in the first half of the 20th century in Eastern Europe and the series of books on 20th century architecture by Prestel. Apart of this monographs dedicated to the countries subject of the research were consulted. The result of the research on site were mostly the investigation through photography of the facade, which displayed a new language compared to the previous period. Where it was possible, this was combined with the investigation of the interior space. Also, sources of the floor plan were looked for, from the references but mostly from archives. As a result, the book includes a review of the study trips documentation, with example images, references and the connection to the online database of photography. The online database built the subject of a common research of Maria Bostenaru with Alex Dill during a short visit funded by NeDiMAH at the Karlsruhe Institute of Technology and the goal of this publication is to document this database. Browsing the database is predecesed by forms on selected architects, for which we present also the biography, along with main works and visual material. In the idea of forms are also the posters of Cristina Gociman about Romanian architects which created cultural heritage during this time. The research thus started at the University of Karlsruhe, where Alex Dill, chair of DOCOMOMO Germany (The association for the documentation and conservation of buildings, sites and neighbourhoods of the Modern Movement) approached the second pillar of the association apart of documentation: conservation. A series of workshops were dedicated to invite specialists from different countries, thematically organised, who were involved in conserving these buildings. The book contains reviews of these conferences and a chapter by Alex Dill about this conservation.

Acknowledgements

We gratefully acknowledge the support of NeDiMAH (Network for Digital Methods in Arts and Humanities) funded by the ESF (European Science Foundation) in making this collaboration possible between the first and the second author, which builds on more than a decade of separate research, but which started on a common ground in Karlsruhe and led to a NeDiMAH short visit in 2013 in Karlsruhe. In Romania, the research led to the doctorate of the first author under the supervision of the third author.

We gratefully acknowledge the support of NeDiMAH also in making possible to print this book.

The study trips which led to this database of images of the architecture in the first half of the 20th century were seldomly self purpose, but mostly linked to conference and other meetings participation for which funding has been provided to the first author. This way, one can talk about seeing if not the world then Europe, and particularly European architecture of the time, through science. The funding for each particular conference is mentioned at the respective place. This includes COST/ESF, ESF, DFG, the Marie Curie Fellows Association, EGU, and the European Commission through conference and Marie Curie grants.

From this fundind we wish to highlight Marie Curie Reintegration Grant for the project PIANO "The innovation in the plan of the current floor: Zoning in blocks of flats for the middle class in the first half of the 20th century", which contributed also to the doctorate research.

Funding for the projects of the co-authors was separate. The conservation research in Karlsruhe has been funded by Beton Marketing Süd as sponsor. The historic research in Bucharest has been funded by AFCN along with the Romanian Cultural Institute.

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Bucharest and Karlsruhe, April 2015

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1. Introduction

This study is a follow-up of a doctoral thesis in the field, which dealt with the buildings from the first half of the 20th century. There was a pre-study on the preservation of historic reinforced concrete housing buildings across Europe, which dealt with decision in seismic retrofit, while the next one dealt with the European features of the spatio-functional organization of buildings from this period. The focus on seismic retrofit led to questions on intervention on and conservation of these buildings. This led to a successful virtual collaboration supported by short visits on the conservation of the Modern Movement. Along with the geographic differences given by the spread of the building typologies in the first half of the 20th century, characteristics in conservation and in spatio-functional organization were researched, too. While thematic essays feature these aspects, the organization in forms gives the parcouer of architect's performance in different countries and of the image of the countries themselves.

1.2 Methodology

The research aimed to document comparatively the spread of mainstream architectural styles along with specifics across Europe. Different typologies, both in their façade and in their interior organization, lead to different needs in conservation. One research method employed was the study on site. For this study trips were organized, as documented in the book. For each study trip an urban route has been designed, based on the information in the literature provided, or on the information from a seminar in Karlsruhe. Apart of the exterior view, to document the façade and style, interior visits were aimed whenever possible. Such tours are sometimes part of raising awareness in the cities towards this heritage and part of the conservation strategy. Along with the geographic tours the vita of the architects active in the respective cities and their main works built material to forms. From urban scale to building scale the interior space was documented in archival research. Another research method was the invitation to experts from the respective countries. For this the second author invited experts to present their conservation approaches in Karlsruhe, both in lecture and in exhibition. The contributions to this book review these approaches. For Bucharest the materials flew into an exhibition related to the historic not geographic development: landmark buildings for each year.

2. Modernism in Bucharest / Maria Bostenaru¹

The built substance in Bucharest was analysed both typologically and sub-area wide, employing urban area survey methods, which allowed identifying the morphological types in the building stock². The “interwar“ building class, that constitutes an architectural landmark, but proved to be the most vulnerable to earthquakes, being founded on alluvial soft soil deposits with high ground water level and having in most cases a seismically inadequate conformation, has potential to prove how early multidisciplinary collaboration resulted in better performance.

Seismic building damage depends on the ground motion (amplitude, frequency, shaking duration) and the building structure (resonance period related to subsoil local transfer) characteristics. The destruction amount in Bucharest was attributed mainly to the so-called “Mexico-city“ effect on alluvial soil deposits. This layer amplified the seismic site response in the period range critical for pre-damaged interwar buildings³, with structures designed for gravitational loads only, altered unfavourably to later function changes. The fundamental period of the flexible Modernism skeleton structure buildings was 0.7-1.6s, a range which corresponds to the spectral maximum obtained for the only reliable accelerogram recorded in Bucharest during the 1977 Vrancea earthquake.

The hydrostatic level varies from 1–5 m in the meadows to bellow 10 m in the plains. Soil-structure interaction is important also for the problematic foundations of these buildings. The architectonic landmarks of Modernism in Romania, located on unfavourable sites according to seismic microzonation, would perform bellow satisfactory in an earthquake with similar spectral content to the 1977 one.

Rules for seismic design were first introduced in Romania after awareness raised by the damage in the 1940 earthquake. A practicing

¹ This chapter represents an improved illustration of a part of an article published in *Natural Hazards and Earth System Sciences* 5, 397–411, 2005 by Maria Bostenaru Dan, under the title “Multidisciplinary co-operation in building design according to urbanistic zoning and seismic microzonation”

² M. Bostenaru Dan, F.Gehbauer: —Applicability and economic efficiency of seismic retrofit measures on historic buildings of mid-XXth century, in: *Proceedings of the 13th World Conference on Earthquake Engineering*, Vancouver, BC, Canada, Paper No. 3347, 2004.

³ Lungu et al (1994)

engineer, leading one of the enterprises which implemented innovative structural and construction management solutions for this building type, documents⁴ successful engineer-architect collaboration during the boom-time of constructing in Avantgarde style⁵. Although interrupted during the economic crisis, this was both incentive and opportunity raiser for creative design and technical solutions in constructing with a material new that time. This co-operation made many reinforced concrete building initiatives possible. Far from adopting the simplest ideal conformation, usability and aesthetics strongly influenced the structural solution. An array of success stories is documented in the following.

Bucharest saw 1920–1940, in two decades of intense building efforts, the construction of the buildings which give its face of today, many of them designed by world-class architects. It was a unique time when not the aesthetics governed, but a solution to the problems of the society: the lack of housing suiting the life style. Urban legislation reacted with the 1934 Master Plan to the anticipated impact of economic development in interwar Romania on urban areas. The land-use occupancy ratio was prescribed for the central zone. Numerous multifunctional (housing, office, shops, cinemas) complexes were constructed making maximum land-use, allowed only with 30% of the total admitted building volume at ground level. The multiple usage of the space through building in the height in urban agglomerations is a concretisation form of the “fight-for-space“ of “urbanforces“⁶ in opposition. The properties of the urban space result from the interaction of social groups modelling it. Bucharest’s central luxurious residences illustrate how a move of interests of the social groups in the urban territory has a parcours, which it follows till finding place. The centre is a special case of the character-of-a-zone. A texture completes spatially another texture when, through organised superposition, they generate mixed assemblies with complex character. In subdivisions of the central area either residential/central functions dominate or dominant residence co-operates with central functions. On the N-S boulevard in Bucharest a spatial co-operative superposition of urban textures with complementary character contributes to a specific zonal ambient. The commercial, cultural, administrative, and residential space complexity expresses a necessity. The

⁴ E. Prager: *Betonul armat în România*, Editura Tehnică, București, 1979.

⁵ M. Bostenaru Dan: —Early reinforced concrete frame condominium building with masonry infill walls designed for gravity loads only!, în: EERI: *World Housing Encyclopedia* summary publication, Oakland, CA, USA, Report ID 96, 2004a.

⁶ A. Sandu, course material, “Ion Mincu” University of Architecture and Urbanism

affluent space is conditioned through its occupation reported to the “lifestyle”, with its socio-economic development and the natural environment conditions in the context of a continuous intervention process in time.

The N-S main boulevard in Bucharest is characterised by typological unity. Residential buildings feature the same structural type of reinforced concrete skeleton. Due to their Modernist style, they belong to a common architectural typology. This building class considered displays a socio-architectural type with a certain typology of the housing unit developed that time. Finally there are common characteristics of the type concerning the ownership pattern and eventual economic strategies resulting therefrom.



Fig. 1. The plan of the protected constructed zone ZCP 04 “Modernist boulevard” in Bucharest. Grey: listed buildings (http://www.lexcivitas.ro/images/stories/04_bratianu.jpg)

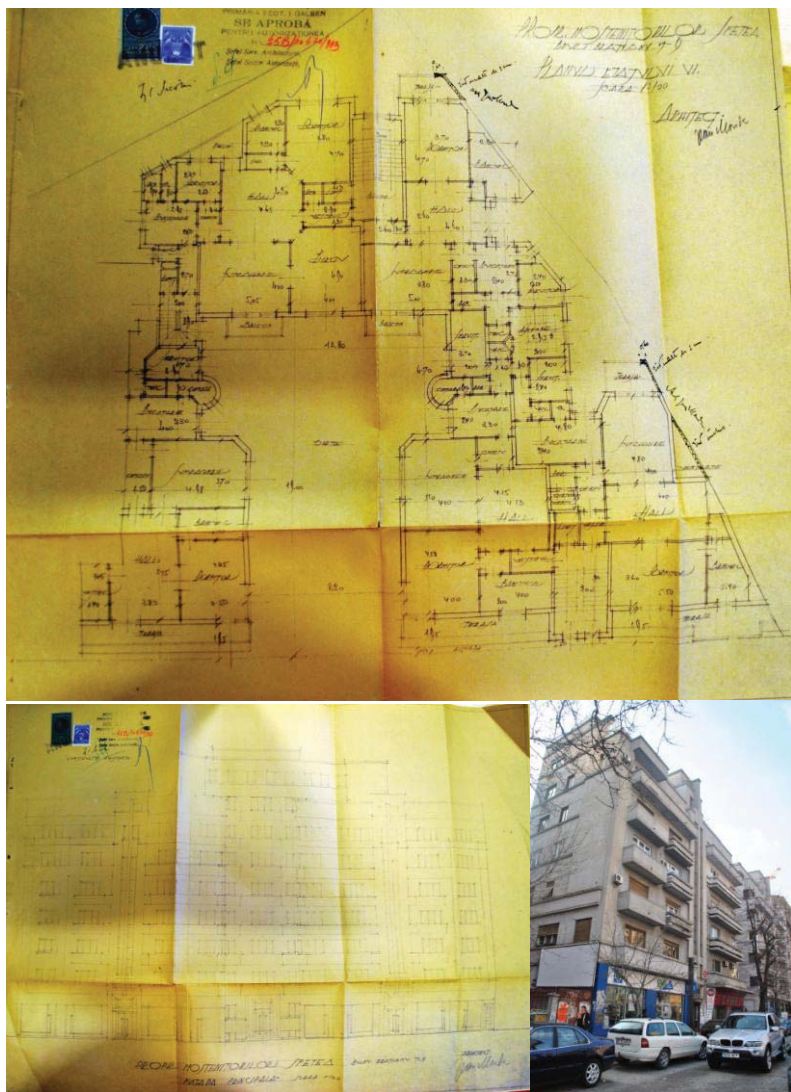


Fig. 2. Bloc of flats, Nicolae Bălcescu 7-9, Architect Jean Monda (1934-35). Facade drawing and plan from the Town Hall of Bucharest city archives (PMB fond ethnic). Photo: M. Bostenaru, 2015. Listed Cod LMI: B-II-m-B-18104.

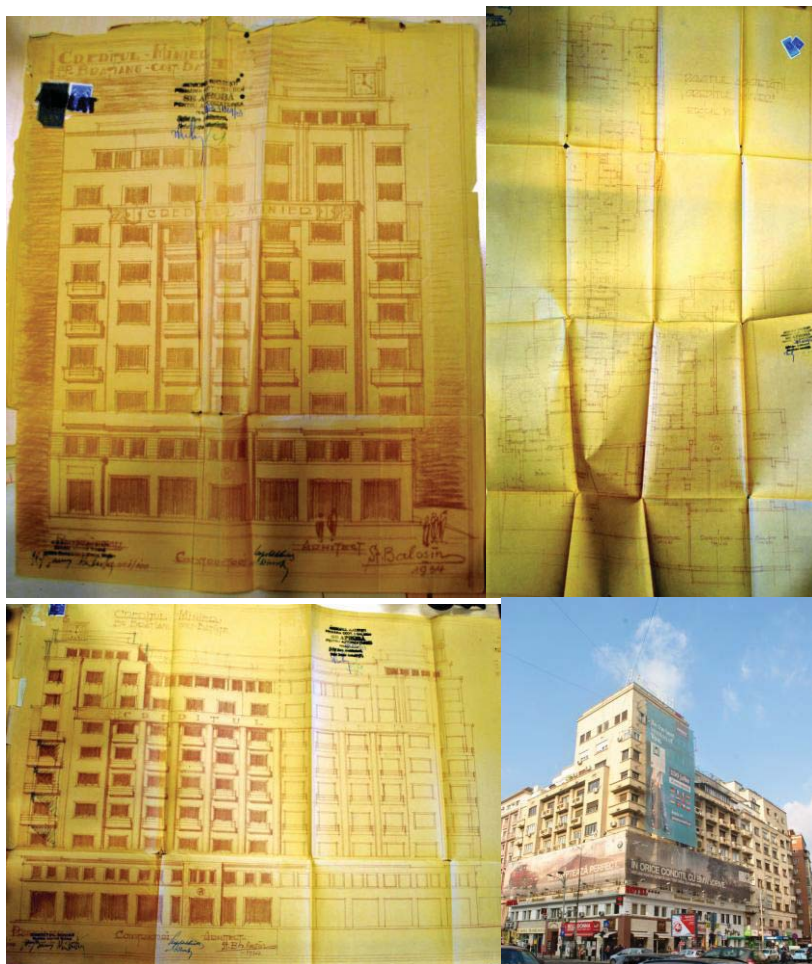


Fig. 3. Creditul miner, architect State Baloşin (1937). Facade drawing and plan from the Town Hall of Bucharest city archives (PMB fond ethnic). Photo: M. Bostenaru, 2015.



Fig. 4. The building on Bălcescu 26 „The palace of the Society for the Economic Action of Romania“, architect Leon Sillion (1925). Archive photo source Rezistența urbană (<http://rezistenta.blogspot.com>), archive image source: Town Hall of Bucharest archives (PMB fond ethnic). Listed Cod LMI: B-II-m-B-18106.

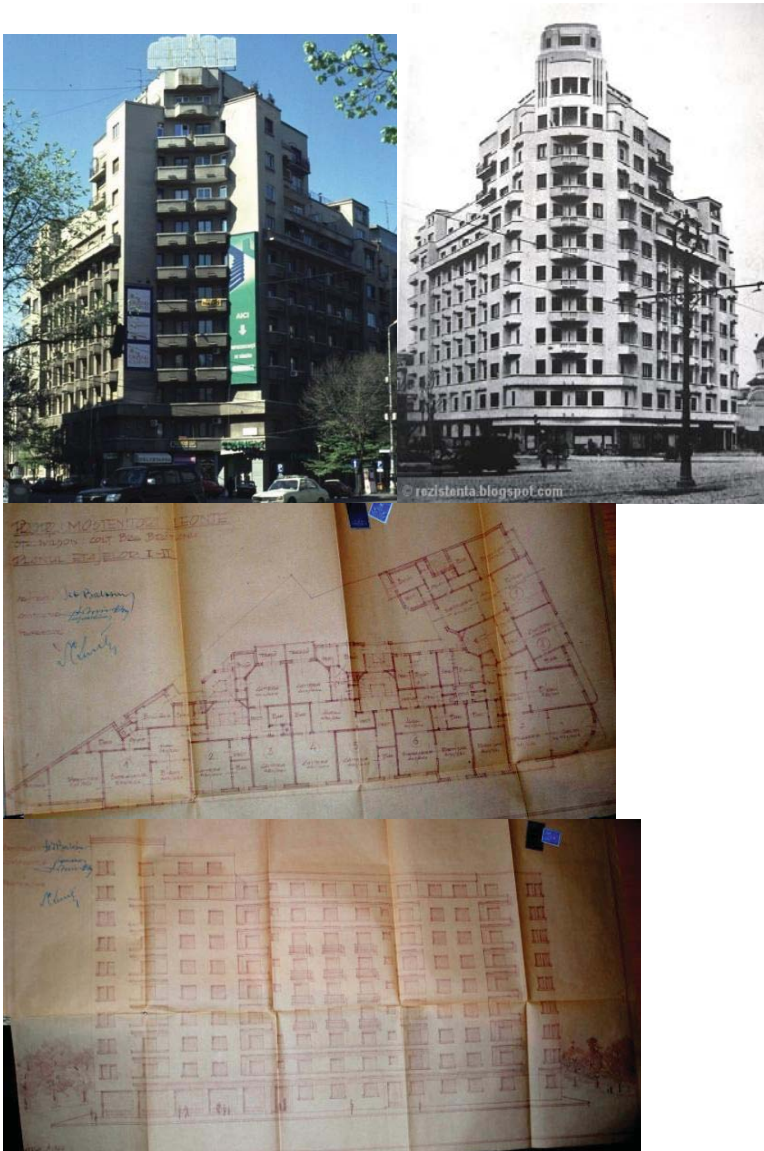


Fig. 5. “Wilson” block of flats (Creditul Rural), architect State Baloșin (1934-36). Foto: M. Bostenaru, 2002, archive photo: Rezistența urbană (<http://rezistența.blogspot.com>), archive plans: Town hall of Bucharest archives (PMB fond tehnic).



Fig. 6. “Turist” block of flats (former Palladio, Soc. “Creditul Minier”), architect Marcel Locar (1937). Foto: M. Bostenaru, 2002, archive plans: Town hall of Bucharest archives (PMB fond tehnic). Seismic reparation through cutting the corner like in case “Wilson”.

Not all buildings behaved badly – some of them displayed a good behaviour as a result of the collaboration between engineer and architect (Fig. 7). We wrote about this in Bostenaru (2005). Here we include a map and a brief naming of the buildings, together with their photographs and plans.

1. C.A.M. (Fig. 8) (architect: Duiliu Marcu, reinforced concrete project Mihail Hangan, execution: -). Listed Cod LMI: B-II-m-A-19871. New technical prescriptions were strictly applied. Architecturally it is characterised by modernist asymmetry and a subtle neoclassicism in the U-shaped plan, as well as high quality finishings.

2. Casa Magistraților (Fig. 9) (architect: Duiliu Marcu, reinforced concrete project: Mircea Gheorghiu, execution: Mircea Gheorghiu). Commercial, office, residential use. At the first floor a festivity hall required for Vierendel frames and beams in order to sustain the masonry walls of the upper floors. Carefully made execution. The architecture is related to that of a building by Leopold Medilanski, currently in retrofit.

3. Bloc „Patria” with cinema (Fig. at the form on the architect) (architect: Horia Creangă, reinforced concrete project: Cristea Mateescu and Ștefan Mavrodin, execution: -). Listed Cod LMI: B-II-m-A-19116. There were difficult static problems for the balcony and roof of the cinema hall. The lateral and gravitational loads are carried by frames forming both the walls and the roof (with parabolic arcs) of this hall. Missing other lateral load resistance prescriptions, the frames were computed for wind loads, although the hall, half located in the basement and placed in a building interior was very lightly solicited this way. Cristea Mateescu used the method ”Cross”, introduced in Romania in that year (1934). These computations led to sufficient stability at any lateral forces. The balcony is the most important construction of this kind, executed not just in RC but also steel. The foundation lays higher than at neighbouring buildings. This work was a milestone of modern RC buildings. It marked the begin of reshaping the forms of the boulevards. The expressive composition contributed to the rhythm of the boulevard with a tower, which became a typical Romanian modernist corner solution.

4. Hotel „Ambasador” (Fig. 10) (architect: Arghir Culina, reinforced concrete project: Dumitru Marcu, execution: Tiberiu Eremia). Listed Cod LMI: B-II-m-B-19115. The entire assembly presents a judicious structural solution: side bodies, free façade on the courtyard of the upper storeys, decreasing size of the upper storeys. Recesses above a certain ”shade”-height were dictated by the urban regulation. Architecturally the building has a monumental appearance, due to symmetry and presence of vertical elements. Urbanistically is a rhythmic point along the boulevard through the set-back courtyard. It forms an impressive complex with the “Patria” building.

5. Hotel „Union” (architect: Arghir Culina, reinforced concrete project: Emil Prager, execution: Emil Prager). Short terms for execution and

delivery led to construction and installation works made simultaneously. The central situation of the parcel generated hard organisation conditions. A special RC work was done because of the higher laid foundation of the neighbouring building: the new foundation was made through a tunnel gallery. Strongly damaged during WWII (4 upper floors and 2/3 of the surface of the building), it could be repaired without further strengthening

6. Foundation Dalles (architect: Horia Teodoru, reinforced concrete project: Aurel Beleş and Dim Marcu, execution: Emil Prager). Listed Cod LMI: B-II-m-B-19114. steel for huge halls

7. Bloc of flats on Calea Victoriei 23 (architect: L. Negoiescu, reinforced concrete project: Jean Hascal, execution: M. Calmanovici). Listed Cod LMI: B-II-m-B-19849. The exterior columns of the skeleton start from the ground floor, being sustained by a concrete wall which constitutes the exterior wall of the basement and which bears the loads from the ground.

8. Bloc of flats on Calea Victoriei 68/70 – “Generala” (Fig. at the form on Richard Bordenache) (architect: Nicolae Nenciulescu, reinforced concrete project: Luigi Cora, execution: Emil Prager). Recently listed, we consulted the dossier. It has two basements and a soft storey. A RC dome over the ground floor widely opened to Calea Victoriei with glass bricks corresponding to the lighting courtyard of the 7 upper storeys. This hole had 10m span. For this purpose a “wall-beam“ was constructed within the mezzanine wall of the façade. Other special problems were provided by the functional use, including parking on the whole basement area, residences and offices in the upper floors, commercial use on the ground floor. Executed very carefully, it proved to be easy to maintain.

9. Bloc of flats at the crossing Calea Victoriei – Splaiul Independenței (architect: Nicolae Cucu, and Gheorghescu, reinforced concrete project: Mihail Hangan, execution: Jean Hascal). Listed Cod LMI: B-II-m-B-19839. It consists of two building wings, one of them next to Splaiul Unirii (the street along the Dâmbovița River). It was founded on a general mat at ~6m depth, the one of ground water. A special solution was adopted for a ground column which was removed, being replaced by a RC frame element made with fast casted cement, with only 12h of hardening.

10. Bloc of flats on Splaiul Independenței (architect: Petre Antonescu, reinforced concrete project: Dim Marcu, execution: Tiberiu Eremia). Listed Cod LMI: B-II-m-B-18938. Special solution to avoid having columns at ground floor level: 3 column arrays at upper floors and only 2 at lower floors: RC Vierendel columns over the ground floor in the whole height of the mezzanine – no problems with openings in the party walls of the mezzanine. Columns to the lighting yard were also discontinued at the level be-

tween mezzanine and first floor. They are sustained by a high beam "macaz cu tirant". The skeleton of the upper floors was computed after the German circular from year 1925.

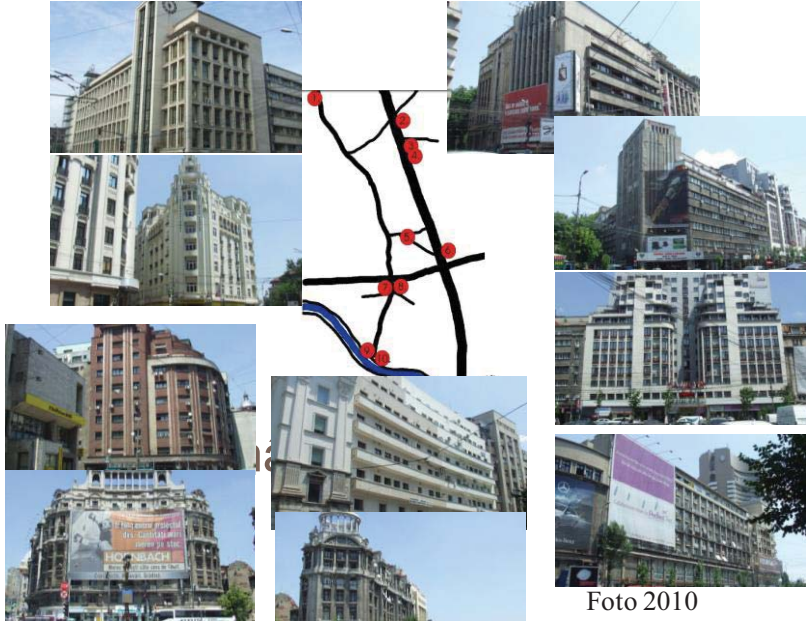


Fig. 7. Buildings with reinforced concrete skeleton structure in Bucharest, and special structural solution. Identification of the buildings according to Prager (1979). Photo: M. Bostenaru, 2010.

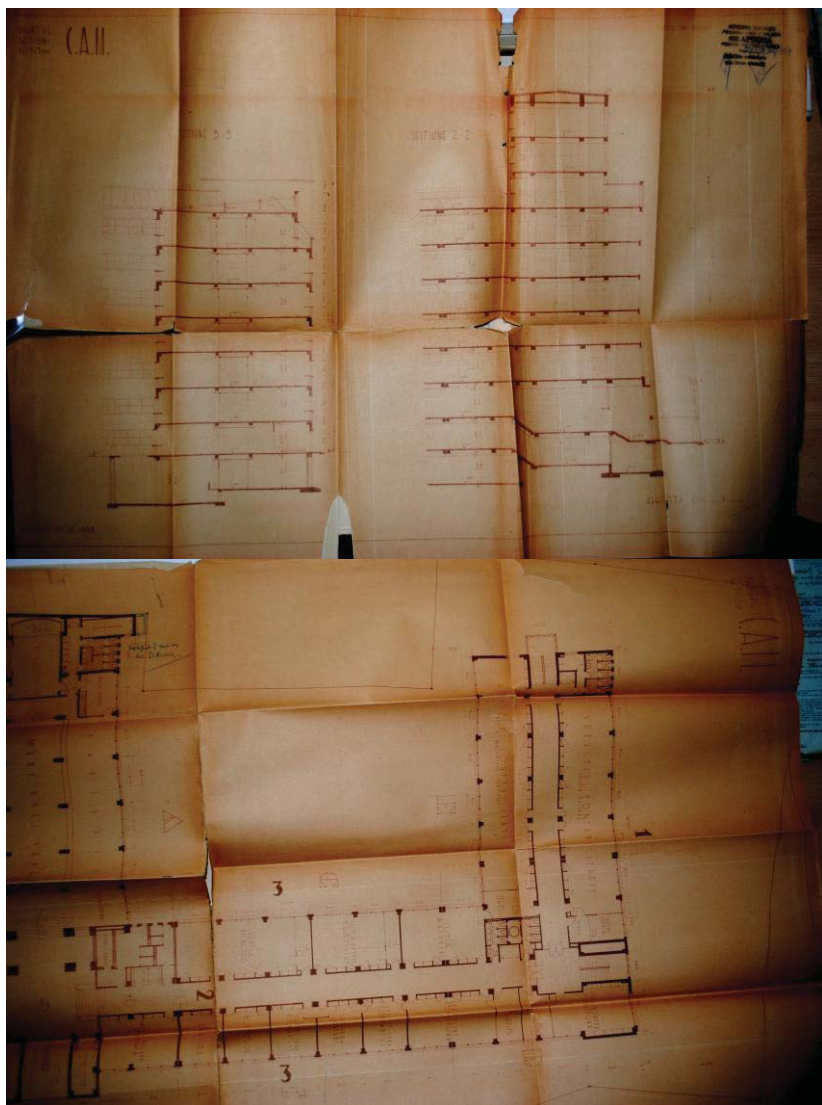


Fig. 8. C.A.M. Palace. Section and plan: Town hall of Bucharest archives (PMB fond ethnic)

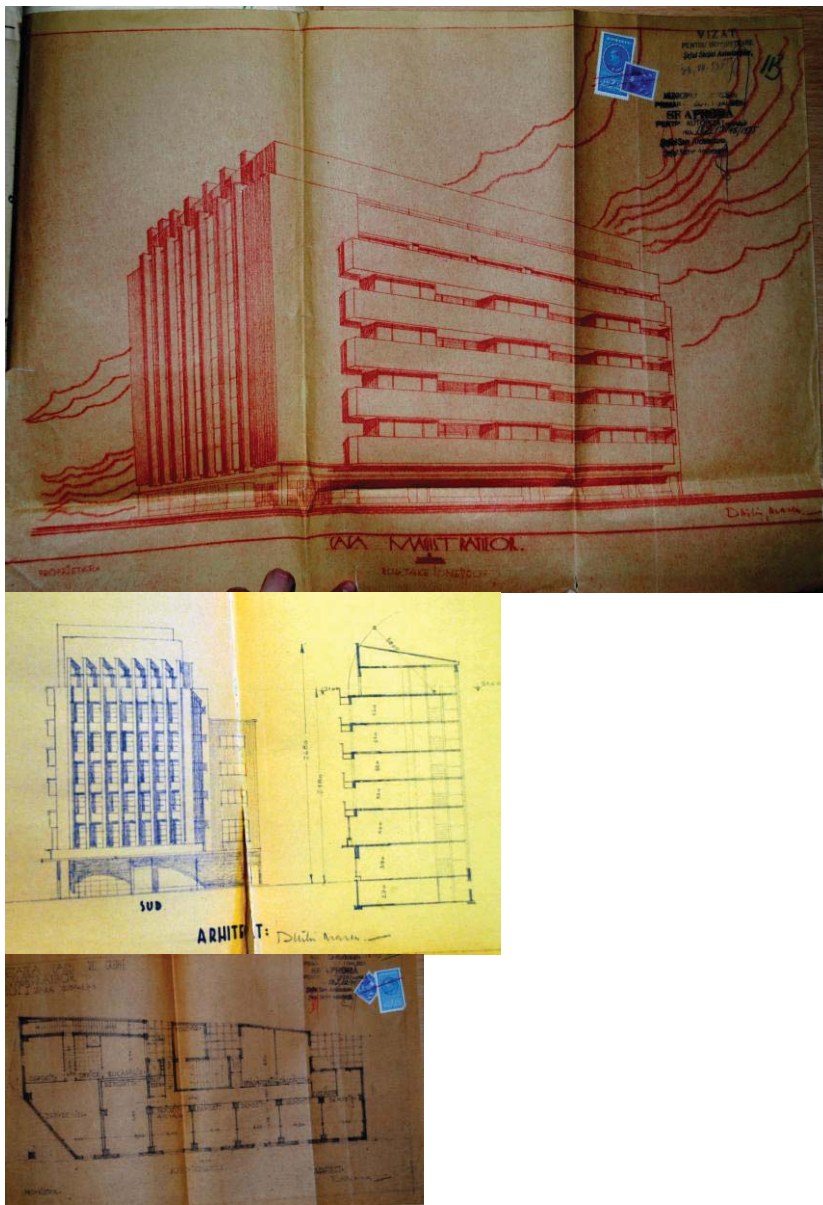


Fig. 9. Magistrates house, architect Duiliu Marcu (1935). Perspective drawing, facade and plan from the Town Hall of Bucharest city archives (PMB fond ethnic).

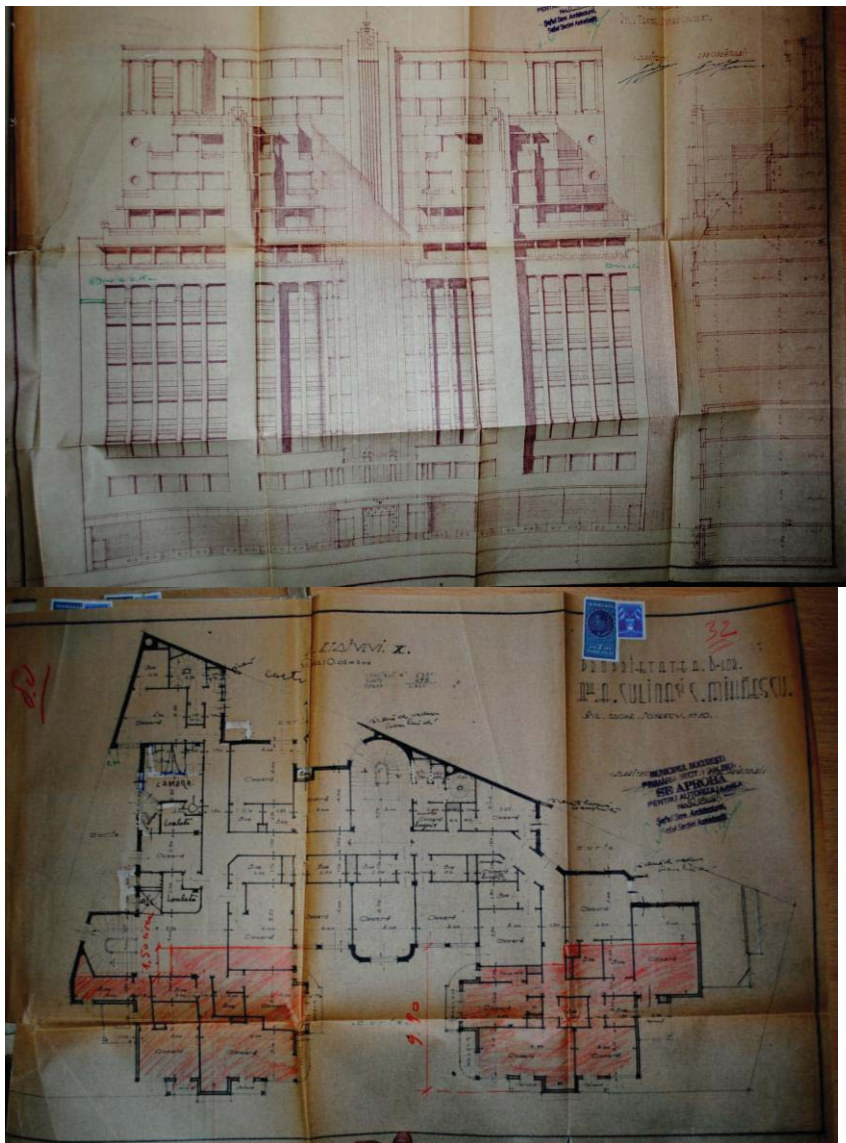


Fig. 10. Hotel "Ambassador", architect Arghir Culina (1935), facade and plan from the Town Hall of Bucharest city archives (PMB fond ethnic).

3. Historic development of 20th century Romanian heritage / Cristina Gociman

The cultural project “Romanian architects – creators of cultural heritage” led by Cristina Olga Gociman, was funded initially for the 2012 National Architecture Biennale by the Ministry of Culture, and continued supported by the Romanian Cultural Institute in an international itinerary. The “Ion Mincu” University of Architecture and Urbanism created a permanent gallery for it. The initial panels can be seen at:

<https://www.bnab.ro/2012/expo-arh-rom/>

The complete list of the panels is the following:

- | | | |
|-----------|----------------------------|---|
| 1869 | architect Alexandru Orăscu | University palace, Piața Universității, Bucharest |
| 1871 | architect Alexandru Orăscu | Grand Hotel du Boulevard, Bulevardul Elisabeta, Bucharest |
| 1889 | architect Ion Mincu | House Monteoru-Catargi, Calea Victoriei, Bucharest |
| | architect Ion N. Socolescu | House Ionescu-Gion, Str. Lucaci nr. 33, Bucharest |
| 1890 | architect Ion Mincu | Central School of Girls, Str. Icoanei, Bucharest |
| 1891 | architect Ion D. Berindei | House Macca, Archeology Institute „Vasile Pârvan”, Bucharest |
| | architect Felix Xenopol | Macca-Villacrosse passage, Calea Victoriei/Str. Eugen Carada |
| 1892 | architect George Mandrea | Fire observatory, Piața Foișorul de Foc, Bucharest |
| | architect Ion Mincu | Bufetul de la șosea (restaurant), str. Ion Mincu, Bucharest |
| 1896 | architect Ion N. Socolescu | Normal school Carol I, str. Mărăști nr. 15, Câmpulung Muscel |
| 1897 | architect Ion Mincu | House Gheorghe Robescu, Str. Mihai Bravu nr. 28, Galați |
| 1897-1905 | architect Ion Mincu | Vaults Ghica, Stătescu, Gheorghieff, Lahovary, Cantacuzino, Bucharest |
| 1898 | architect Ion D. Berindei | House with lions, str. Dianeii, Constanța |
| | architect Toma Dobrescu | National college „Tudor Vladimirescu”, Târgu Jiu |

- arhitect Ștefan Ciocârlan Palace of the newspaper „Adevărul”, str. Constantin Mille, Bucharest
- 1900 arhitect Alexandru Săvulescu Post palace, Calea Victoriei nr. 12, Bucharest
- 1903 arhitect Ion D. Berindei Cantacuzino Palace, Calea Victoriei nr. 141, Bucharest
- 1904 arhitect Ion Mincu Stavropoleos church, str. Stavropoleos nr. 4, Bucharest
- arhitect Ion Mincu Administrative palace, Str. Domnească, Galați
- 1905 arhitect Cristofi Cercheș Nicolae Minovici villa, str. Dr. Nicolae Minovici nr. 1, Bucharest
- 1908 arhitect Petre Antonescu Brătianu houses, str. Biserica Amzei nr. 3-5, Bucharest
- arhitect Ștefan Burcuș Bursa palace, str. Ion Ghica nr. 4, Bucharest
- arhitect Nicolae Mihăescu House Mița Biciclista, str. Cristian Tell nr. 9, Bucharest
- 1909 arhitect Ion D. Berindei Astronomy observatory Amiral Vasile Urseanu, Bucharest
- 1910 arhitect Petre Antonescu Palace of the Ministry of Public Works, Bucharest
- arhitect Daniel Renard Casino, Boulevard Regina Elisabeta, Constanța
- 1911 arhitect Grigore Cerchez Odeon theatre, Calea Victoriei, Bucharest
- arhitect Dumitru Maimarolu Palace of the Military Circle, Bucharest
- arhitect Nicolae Mihăescu Saints Nicolae and Alexandru cathedral, Sulina
- 1912 arhitect Spiridon Ceganeanu House Gh. Petrașcu, Piața Romană corner with Căderea Bastiliei, Bucharest
- arhitect Grigore Cerchez Justice Palace, Str. Domnească, Galați
- arhitect Arghir Culina Cișmigiu hotel, Boulevard Regina Elisabeta, Bucharest
- arhitect Nicolae Nenciulescu Summer garden Capitol, str. Constantin Mille, Bucharest
- 1913 arhitect Petre Antonescu Casino in Sinaia, parc Dimitrie Ghica
- arhitect Ion D. Berindei Cantacuzino palace – Small Trianon, Florești, Prahova

- 1914 architect Stătie Ciortan Palace Vama Poștei, str. Lipsăni nr. 1, Bucharest
architect Ernest Dondeaud Pavillion of the bathes in Govora
- 1915 architect Dumitru Maimarolu Armenească church, Bucharest
architect Paul Smărăndescu Vânători villa, Boulevard Carol nr. 43, Sinaia
- 1916 architect Dumitru Maimarolu Palace of the Chamber of Deputies, Mitropoliei alley, Bucharest
- 1921 architect George Sterian House of architect George Sterian, Str. Mihai Eminescu nr. 10, Bacău
- 1923 architect Petre Antonescu Palace of the Marmorosch Blank bank, str. Doamnei nr. 4, Bucharest
- 1924 architect Virginia Haret „Tinerimea Română” block, str. Schitu Măgureanu, Bucharest
- 1926 architect Virginia Haret House of the architect, Spătarului entry nr. 8, Bucharest
- 1927 architect Grigore Cerchez Faculty of Architecture Ion Mincu, str. Biserica Enei nr. 1, Bucharest
architect Cristofi Cerchez Czech embassy in Romania, str. Ion Ghica nr. 11, Bucharest
architect Florea Stănculescu Agriculture palace, Brăila
- 1928 architect George Matei Cantacuzino Palace of the Bank Chrissoveloni, Str. Lipsăni, Bucharest
architect Duiliu Marcu State Theatre, Timișoara
architect Ion D. Traianescu Madona Dudu church, Craiova
- 1929 architect Paul Smărăndescu Cerbu hotel, Sinaia
- 1930 architect George Matei Cantacuzino Tudor Arghezi memorial house, str. Mărțișor, Bucharest
architect Octav Doicescu Restaurant in Băneasa forest, Privighetorilor Alley, Bucharest
architect Jean Pompilian Extension of the Belvedere cigarette factory, Calea Giulești nr. 1-3, Bucharest
- 1931 architect Horia Creangă ARO block, Boulevard Magheru, Bucharest
architect Marcel Iancu villa Jean Juster, str. Silvestru nr. 75, Bucharest
- 1932 architect Horia Creangă villa Bunescu, Aleea Alexandru nr. 12, Bucharest
architect Nicolae Nenciulescu Royal Palace, Calea Victoriei nr. 49-53, Bucharest

- architect Gheorghe Simotta Block on Str. Atena nr. 20, Bucharest
- 1933 architect Petre Antonescu Accademia di Romania, Rome
- architect State Baloşin Block Wilson, Boulevard Magheru nr. 2, Bucharest
- architects George Cristinel/Constantin Pomponiu Orthodox cathedral, Piaţa Avram Iancu, Cluj-Napoca
- architect Constantin Iotzu Palace of the Association of Veteriniry Doctors, Boulevard Elisabeta nr. 53, Bucharest
- architect Duiliu Marcu Block Aleea Modrogan nr. 1, Bucharest
- architect Jean Pompilian Al. I. Cuza University, Iaşi
- 1934 architect George Matei Cantacuzino Bellona hotel, str. Falezii, Eforie Nord
- architect Stătie Ciortan Town museum, Câmpulung Muscel
- architect Horia Creangă Elisabeta Cantacuzino villa, Aleea Alexandru corner with str. Tirana, Bucharest
- architect Dumitru Ionescu-Berechet Town hall, Câmpulung Muscel
- architect Marcel Locar Cantacuzino block, str. C.A. Rosetti nr. 43, Bucharest
- architect Paul Smărăndescu Sanda villa, Balchik, Bulgaria
- architect George Matei Cantacuzino Palace of Industrial Credit, Piaţa Universităţii, Bucharest
- 1935 architect Horia Creangă Ottulescu block, str. Gh. Manu nr. 12, Bucharest
- architect Grigore Ionescu Toria sanatory, Covasna
- architect Toma T. Socolescu Central halls, Str. Griviţei, Ploieşti
- architect Horia Teodoru Restoration of the Curtea Veche church, str. Franceză, Bucharest
- 1936 architect Petre Antonescu Palace of the Faculty of Law, Boulevard Kogălniceanu nr. 36-46, Bucharest
- architect Henrieta Delavrancea-Gibory House Prager, Boulevard Aviatorilor nr. 32, Bucharest
- architect Octav Doicescu Mioriţa fountain, Şoseaua Bucureşti-Ploieşti
- architect Duiliu Marcu Special train station Băneasa, Piaţa Gara Băneasa, Bucharest
- architect Paul Emil Constantin Miculescu Ford factory, Calea Floreasca, Bucharest

- architect Tiberiu Niga Block on Calea Victoriei 122, Bucharest
- architect Tiberiu Niga Block Boulevard Schitu Măgureanu nr. 53, Bucharest
- 1937 architect Dumitru Ionescu-Berechet Parcul Domeniilor church (Cașin), Boulevard Mărăști nr. 16, Bucharest
- architect Richard Bordenache Headquarters of the General Association of Engineers in Romania, Boulevard Dacia, Bucharest
- architect George Cristinel Athenee of the King Ferdinand I University, Str. Emanuel de Mortonne, Cluj
- architect Henrieta Delavrancea-Gibory Cancicov house, Balchik
- architect Henrietta Delavrancea-Gibory Vâlcovici house, str. Londra nr. 44, Bucharest
- architect Marcel Iancu Vasile Moga block, str. Armenească nr. 16, Bucharest
- architect Tiberiu Niga Housing block, str. General Berthelot, Bucharest
- architect Gheorghe Simotta Block on str. Blănari 12-14, Bucharest
- 1938 architect Georghe Matei Cantacuzino Corp Eforiei Kretzulescu, Calea Victoriei nr. 45, Bucharest
- architect Horia Creangă ARO block, Calea Victoriei, Bucharest
- architects George Cristinel/Constantin Pomponiu Mărășești mausoleum, Vrancea county
- architect Henrietta Delavrancea-Gibory Cinema Capitol, Boulevard Regina Elisabeta nr. 36, Bucharest
- architect Octav Doicescu Banloc block, Calea Victoriei, Bucharest
- architect Octav Doicescu Ministry of Propaganda, str. Wilson nr. 8, Bucharest
- 1939 architect Dimitrie Nicolae Cucu C.E.C. pension house, Splaiul Unirii nr. 5, Bucharest
- architect Arghir Culina Ambasador hotel, Boulevard Magheru, Bucharest
- architect Florea Stănculescu Institute of Agronomic Research, Boulevard Mărăști nr. 61, Bucharest
- architect Victor Ștefănescu North Train Station, Piața Gării, Bucharest
- 1940 architect Horia Creangă Malaxa (Faur) factory, Boulevard Basarabia, Bucharest

- architect Radu Dudescu Romanian National Bank, str. Doamnei, Bucharest
- architect Nicolae Nenciulescu Royal stables, 303 dormitory, Şoseaua Cotroceni nr. 140, Bucharest
- 1941 architect Nicolae Ghika Budeşti Peasant Museum, Piaţa Victoriei, Bucharest
- architect Duiliu Marcu Military Academy, Bucharest
- 1942 architect Constantin Iotzu Saint Elefterie Nou church, Piaţa Elefterie nr. 6, Bucharest
- 1944 architect Duiliu Marcu Palace of the Ministry Council, Bucharest, Piaţa Victoriei
- 1946 architect Radu Dudescu Zodiac block, Calea Dorobanţi, Bucharest
- architect Ion D. Traianescu Cathedral saint Trei Ierarhi, Timișoara
- 1948 architect Mircea Alifanti Airport Aurel Vlaicu Băneasa, Şoseaua Bucureşti-Ploieşti
- 1949 architects Horia Maicu/Mircea Alifanti/Tiberiu Ricci Casa Scânteii, Bucharest
- architect Tiberiu Ricci Palace of Radio, Str. Nuferilor, Bucharest
- 1950 architect Horia Creangă Obor halls, Piaţa Obor, Bucharest
- 1951 architect Richard Bordenache Palazzo Calcaneo, Piaţa Palatului, Bucharest
- 1953 architect Octav Doicescu National Opera, Piaţa Elefterie, Bucharest
- architect Paul Emil Constantin Miculescu Free space theatre in Bălcescu park, Boulevard Bucureştii Noi nr. 105, Bucharest
- 1956 architect Ştefan Baş Restoration of the Brâncoveanu palace in Potlogi
- 1958 architect Haralamb G. Georgescu House Pasinetti, Beverly Hills, USA
- architect Constantin Moşinschi Block of flats/galleries Piaţa Casei Centrale a Armatei, Bucharest
- 1959 architect Eugeniu Cosmatu Block of flats str. Cristian Tell nr. 1-3, Bucharest
- architect Sofia Ungureanu Block La coloane, Piaţa Romană, Bucharest
- architects Horia Maicu/Romeo Belea Sala Palatului, Bucharest
- 1960 architect Cezar Lăzărescu Mamaia resort

- architects Tiberiu Niga/Garcia Leon Housing complex, Piața Palatului, Bucharest
- 1961 architect Nicolae Vlădescu Culture house, Mangalia
- 1962 architect Mircea Săndulescu Mathematics institute Simion Stoilow, Bucharest
- architect Theonic Săvulescu Train station, Brașov
- 1963 architect Dimitrie Nicolae Cucu Heroes monument, Parcul Carol, Bucharest
- 1964 architect George Matei Cantacuzino Pavillions of Mitropoliei Palace, Iași
- architect Ascanio Damian Pavillion of the International Fair, Bucharest
- architect Hans Fackelmann Timișoara University
- architect Aurelian Trișcu PTTR post office, Eforie Nord
- 1938-1965 architects Horia Creangă/Ion Rădăcină ARO hotel, Brașov
- 1967 architect Cezar Lăzărescu Europa hotel, Eforie Nord
- 1968 architect Nicolae Porumbescu State circus Globus, Bucharest
- 1969 architect Vasile Mitrea Telephone central, Cluj Napoca
- 1970 architect Cleopatra Alifanti Extension Academia de Studii Economice, Bucharest
- architect Mircea Alifanti Administrative palace, Baia Mare
- architect Anton Dâmboianu/Gheza Vida Monument of the Romanian soldier, Carei
- architect Hans Fackelmann Roman-catholic religious centre, Orșova
- architect Ioana Grigorescu Restoration of the assembly of Sucevița monastery
- architect Dinu Mihai Hariton Intercontinental hotel, Bucharest
- architect Constantin Joja Restoration Hanul cu Tei, Bucharest
- architect Constantin Joja Restoration Hanul lui Manuc, Bucharest
- architect Cezar Lăzărescu International airport Henri Coandă, Bucharest-Otopeni
- architect Nicolae Porumbescu Administrative palace, Botoșani
- architect Tiberiu Ricci Romanian television, Bucharest
- architects Elena Voinescu/George Filipeanu Extension Architecture Institute Ion Mincu, Bucharest
- 1972 architect Octav Doicescu Politechnic institute, Bucharest
- architect Dorin Gheorghe House of culture of syndicates, Ploiești
- architect Șerban Manolescu Amfiteatru assembly, Olimp resort

- 1973 architects Horia Maicu/Romeo Belea National theatre, Bucharest
 architect Constantin Săvescu National theatre, Târgu Mureș
 architect Nicolae Vasilescu Landing lamp, Constanța
 architect Nicolae Vlădescu House of culture of syndicates,
 Târgoviște
- 1974 architect Dorin Gheorghe House of culture of syndicates, Sibiu
 architect Alexandru Iotzu National theatre Marin Sorescu, Craiova
- 1975 architects Constantin Dobre/Victor Ivaneș/Toma Olteanu Hotel
 Forum, Costinești
 architect Constantin Rulea Academy Ștefan Gheorghiu, bucharest
- 1976 architect Gheorghe Leahu Unirea department store, Bucharest
- 1977 architect Cezar Lăzărescu Parlament palace, Khartoum, Sudan
- 1978 architect Radu Tănăsoiu Central assembly and prefect headquar-
 ters, Brăila
 architect Mihail Albert Caffé Elderly dormitory, Str.
 Jimbolia, Bucharest
- 1979-1989 architects Manuela Antip/Gheorghe Beznilă/Adriana
 Bunu/Dan Constantinescu/Viorica Curea/Lia Dima/Geta Gabrea/Ion
 Marineci/Clement Moldoveanu/Victoria Nacrescu Radu/Alin
 Negoescu/Ioan Novîțchi/Alexandru Panaitescu/Ileana Paina/Doina
 Pătra/Ion Podocea/Bogdan Popovici/Cătălin Stanciu Metro sta-
 tions, Bucharest
- 1980 architect Emil Barbu Popescu Student park, Student complex
 Tei, Bucharest
 Architect Nicolae Porumbescu Central assembly and town hall,
 Satu Mare
- 1982 architect Eugeniu Cosmatu Bucuresti hotel complex, Calea
 Victoriei, Bucharest
 architect Stefan Lungu House of Science and Tech-
 nique for Zouth, Râmnicu-Vâlcea
- 1983 architect Constantin Rulea Restoration of Hotel Caraiman, Sinaia
- 1984 architect Nicolae Vlădescu Restoration Cotroceni Palace, Bucharest
 architect Dan Sergiu Hanganu Row houses, Parc Quesnel,
 Montreal, Quebec, Canada
 architect Zoltán Takács Postăvăria Română entreprise,
 Bucharest
- 1985 architects Gheorghe Nădrag/Dinu Mihai Hariton National Pal-
 ace of Children, Bucharest
- 1986 architects Emil Barbu Popescu/Dorin Ștefan House of Science and
 Technique for Youth, Slatina

1869-1989

ARHITECTI ROMÂNI CREATORI DE PATRIMONIU

ARHITECTI ROMÂNI CREATORI DE PATRIMONIU CULTURAL / ROMANIAN ARCHITECTS CREATORS OF CULTURAL PATRIMONY

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URBANISM 'ION MINCU'
'ION MINCU' UNIVERSITY OF
ARCHITECTURE AND URBAN PLANNING

<p>ALIFANTI, Cleopatra - Extinderea Academiei de Studii Economice - Aeroportul Băneasa, București</p> <p>ALIFANTI, Mircea - Palatul Administrativ, Baza Mare - Casa Școlii, București</p> <p>ANTIF, Manuela - Stațiile de metrou București</p> <p>ANDRESCU-HARET, Virginia - Imobilul "Tinerimea Română" - Locuințe arhitecte, București</p> <p>ANTONESCU, Petre - Caznoul din Sinaia - Academia de România, Roma - Palatul Universității (Facultatea de drept) - Casele Brătianu - Banca Marmorosh Blank - Palatul Ministerului Lucrurilor Publice, București - Imobilul Wilson, București</p> <p>BALOSIN, Stăte</p> <p>BALS, Ștefan - Restaurarea Palatului de la Polog - Hotel Intercontinental, București</p> <p>BELEA, Romeo - Teatrul Național, București - Sala Palatului, București</p> <p>BERNDEL, I.D. - Palatul Cantacuzino, București - Observatoriu Astronomic, București - Casa cu lei, Constanța - Casa Macca, București - Palatul Cantacuzino, Florență</p> <p>BEZNILĂ, Gheorghe - Stațiile de metrou București</p> <p>BORDENACHE, Richard - Palazzo Calceano, București - Imobilul AGR, București</p> <p>BURCUȘ, Ștefan - Biblioteca Națională, București</p> <p>BUNU, Adriana - Stațiile de metrou București</p> <p>CAFFE, Albert Mihail - Cămin de bătrâni, București</p>	<p>CANTACUZINO, G.M. - Hotel Belona, Eforie sud - Banca Cristovonilor, București - Casa Tudor Argeșoi, București - Corpul Eforiei Kretzulescu, București - Pavilionale Palatului Mitropoliei, Iași - Vila Mirovici, București - Ambasada Republicii Ceha, București</p> <p>CERCHEZ, Cristofi</p> <p>CERCHEZ, Grigore - Facultatea de Arhitectură, București - Teatrul Odeon, București - Palatul de Justiție, Galați</p> <p>CIOCĂRLAN, Ștefan - Palatul zămlii "Adevărul", București</p> <p>CEGANEANU, Spindon - Casa Petrușcu, București</p> <p>CIORTAN, Stăte - Palatul "Yama People", București - Muzeul originesc: Câmpulung Muscel</p> <p>COSMATU, Eugen - Imobil str. Cristian Tell nr. 1-3, București - Complexul hotelier București, București</p> <p>COSTINESCU, Dan - Stațiile de metrou București - Imobilul Aro, Calea Victoriei - Imobilul Aro, B-dul Magheru - Vila Bunescu, București - Vila Cantacuzino, București - Fabricile Malaxa, București - Halele Otor, București - Imobilul Onulescu, București - Hotel ARO, Brașov</p> <p>CRISTINEL, G. - Ateneul Universității "Ferdinand I", Cluj - Muzeul din Mădăgești - Catedrala ortodoxă, Cluj</p> <p>CUCU, Nicolae - Monumentul din Parcul Carol - Casa de pensii a C.E.C., București</p>	<p>CULINA, Arghir - Hotel Cișmigiu, București - Hotel Ambasador, București</p> <p>CUREA, Viorica - Stațiile de metrou București</p> <p>DAMIAN, Ascanio - Romașor, București</p> <p>DĂMBOIANU, Anton - Monumental ostașului român de la Carci - Henrieta - Casa Caraciov, Balic - Casa Prager, București - Casa Văcănoiu, București - Cinema Capital, București</p> <p>DIMA, Lia - Stațiile de metrou București</p> <p>DOBRE, Constantin - Hotel "Forum", Costinești</p> <p>DOBRESCU, Toma - Colegiul "Tudor Vladimirescu", Târgu Jiu - The Tudor Vladimirescu College, Târgu Jiu</p> <p>DOICESCU, Octav - Făstina Morija, București - Ministerul Propagandei, București - Restaurantul din Băneasa, București - Opera Română, București - Imobilul Bancor, București - Institutul Politehnic București - Pavilionul Băilor din Gova</p> <p>DONEAID, Ernest - Pavilionul Institutului de Statistică</p> <p>DUDEȘCU, Radu - Banca Națională a României, București - Biocul Zodiac, București</p> <p>FACKELMANN, Hans - Centrul de cult Romano-Catolic, Orșova - Universitatea Tehnică din Timișoara</p> <p>FILIPESCU, George - Extinderea Institutului de Arhitectură, București</p>
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Fig. 11. Architects included in the exhibition and their works.

1869-1989

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UNIA ARHITECTILOR DIN ROMANIA
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ARHITECTI ROMÂNI CREATORI DE PATRIMONIU



ARHITECTI ROMÂNI CREATORI DE PATRIMONIU CULTURAL / ROMANIAN ARCHITECTS CREATORS OF CULTURAL PATRIMONY

<p>GABREA, Geta</p> <ul style="list-style-type: none"> - Stațiile de metrou București - The Subway Stations in Bucharest 	<p>IVANES, Victor</p> <ul style="list-style-type: none"> - Hotel "Forum", Costinești 	<p>MARINECI, Ion</p> <ul style="list-style-type: none"> - Stațiile de metrou București - The Subway Stations in Bucharest 	<p>MICLESCU, Paul Emil</p> <ul style="list-style-type: none"> - Fabrica Ford, București - The Ford Factory in Bucharest - Teatrul în aer liber, București Noi, București - The Outdoor Theater, București Noi, Bucharest
<p>GARCIA, Leon</p> <ul style="list-style-type: none"> - Ansamblul de locuințe din Piața Palatului - The Housing Ensemble in the Palace Square 	<p>JOJA, Constantin</p> <ul style="list-style-type: none"> - Restaurarea Hanului lui Manuc, București - The Restoration of Hanul lui Manuc, Bucharest - Restaurarea Hanului cu Tei, București - The Tei Han in Tei in Bucharest, Bucharest 	<p>MIHAESCU, Nae C.</p> <ul style="list-style-type: none"> - Catedrala Sf. Nicolae, Sulina - The Holy Nicholas Cathedral in Sulina - Casa Mpa Bicicleta, București - The House of Mpa Bicycle, Bucharest 	<p>MIHAESCU, Nae C.</p> <ul style="list-style-type: none"> - Catedrala Sf. Nicolae, Sulina - The Holy Nicholas Cathedral in Sulina - Casa Mpa Bicicleta, București - The House of Mpa Bicycle, Bucharest
<p>GEORGESCU, Haralamb</p> <ul style="list-style-type: none"> - Casa Pașinet, S.U.A. - The Pașinet House, U.S.A. 	<p>LAZARESCU, Cezar</p> <ul style="list-style-type: none"> - Hotel Europa, Eforie Nord - The Europa Hotel, Eforie Nord - Stațiunea Mamaia - The Mamaia Resort - Aeroportul Internațional "Henri Coandă", Otopeni - The International Airport "Henri Coandă", Otopeni - Parlamentul din Kharibum, Sudan - The Romanian Parliament, Sudan 	<p>MINCU, Ion</p> <ul style="list-style-type: none"> - Bulevardul de Șosea, București - The Șosea Boulevard in Bucharest - Școala Centrală de Iete, București - The Central School in Bucharest - Restaurarea Bisericii Slavopropietarilor, București - The Restoration of Church Slavopropietarilor, Bucharest - Casa Morțoiu, București - The Morțoiu House, Bucharest - Casa Robescu, București - The Robescu House, Bucharest - Cavouri în Cimitirul Bellu, București - The Bellu Cemetery, Bucharest - Palatul Administrativ, Galați - The Administrative Palace, Galați 	<p>MIHĂESCU, Nae C.</p> <ul style="list-style-type: none"> - Catedrala Sf. Nicolae, Sulina - The Holy Nicholas Cathedral in Sulina - Casa Mpa Bicicleta, București - The House of Mpa Bicycle, Bucharest
<p>GHEORGHE, Dorin</p> <ul style="list-style-type: none"> - Casa de Cultură și Sindicatură, Ploiești - The Culture House and Trade Union, Ploiești - Casa de Cultură și Sindicatură, Sibiu - The Culture House and Trade Union, Sibiu 	<p>LEAHU, Gheorghe</p> <ul style="list-style-type: none"> - Magazinul Unirea, București - The Unirea Commercial Center, Bucharest 	<p>MITREA, Vasile</p> <ul style="list-style-type: none"> - Centrala Telefonică din Cluj-Napoca - The Call Center, Cluj-Napoca 	<p>MIHĂESCU, Nae C.</p> <ul style="list-style-type: none"> - Catedrala Sf. Nicolae, Sulina - The Holy Nicholas Cathedral in Sulina - Casa Mpa Bicicleta, București - The House of Mpa Bicycle, Bucharest
<p>GHIKA-BUDEȘTI, N.</p> <ul style="list-style-type: none"> - Muzeul Țărânuț Român, București - The Peșani Museum, Bucharest 	<p>LOCAR, Marcel</p> <ul style="list-style-type: none"> - Imobilul str. Jean Louis Calderon, București - Immobile, Jean Louis Calderon Street, Bucharest 	<p>MOLDOVEANU, Clement</p> <ul style="list-style-type: none"> - Stațiile de metrou București - The Subway Stations in Bucharest 	<p>MIHĂESCU, Nae C.</p> <ul style="list-style-type: none"> - Catedrala Sf. Nicolae, Sulina - The Holy Nicholas Cathedral in Sulina - Casa Mpa Bicicleta, București - The House of Mpa Bicycle, Bucharest
<p>GRIGORESCU, Ioana</p> <ul style="list-style-type: none"> - Restaurarea ansamblului Mânăstiri Sucevița - The Restoration of Sucevița Monastery 	<p>LUNGU, Ștefan</p> <ul style="list-style-type: none"> - Casa Știrpilor Tehnici, Râmnicu-Vilcea - The Știrpilor Technical House, Râmnicu-Vilcea 	<p>MOȘINȘCHI, Constantin</p> <ul style="list-style-type: none"> - Stațiile de metrou București - The Subway Stations in Bucharest 	<p>MIHĂESCU, Nae C.</p> <ul style="list-style-type: none"> - Catedrala Sf. Nicolae, Sulina - The Holy Nicholas Cathedral in Sulina - Casa Mpa Bicicleta, București - The House of Mpa Bicycle, Bucharest
<p>HANGANU, Dan Sergiu</p> <ul style="list-style-type: none"> - Locuințe îngruite, Quebec, Canada - Row Houses, Quebec, Canada 	<p>MAICU, Hora</p> <ul style="list-style-type: none"> - Casa Săcânteii, București - The Săcânteii House, Bucharest - Sala Palatului, București - The Palace Hall, Bucharest - Teatrul Național București - The National Theater, Bucharest 	<p>NAVRESCU RADU, Victoria</p> <ul style="list-style-type: none"> - Stațiile de metrou București - The Subway Stations, Bucharest 	<p>MIHĂESCU, Nae C.</p> <ul style="list-style-type: none"> - Catedrala Sf. Nicolae, Sulina - The Holy Nicholas Cathedral in Sulina - Casa Mpa Bicicleta, București - The House of Mpa Bicycle, Bucharest
<p>HARITON, Dinu</p> <ul style="list-style-type: none"> - Hotel Intercontinental, București - The Intercontinental Hotel, Bucharest - Palatul Național al Copiilor, București - The Children Palace, Bucharest 	<p>MAIMAROLU, Dumitru</p> <ul style="list-style-type: none"> - Biserica Amărănească, București - The Amărănească Church, Bucharest - Cercuri Militare, București - Military Circles, Bucharest - Palatul Camerei Deputaților, București - The Palace of Deputies Chamber, Bucharest 	<p>NĂDRAG, Gheorghe</p> <ul style="list-style-type: none"> - Palatul Național al Copiilor, București - The Children Palace, Bucharest 	<p>MIHĂESCU, Nae C.</p> <ul style="list-style-type: none"> - Catedrala Sf. Nicolae, Sulina - The Holy Nicholas Cathedral in Sulina - Casa Mpa Bicicleta, București - The House of Mpa Bicycle, Bucharest
<p>IANCU, Marcel</p> <ul style="list-style-type: none"> - Via Juster, București - The Juster Street, Bucharest - Via Mogi, București - Mogi Villa, Bucharest 	<p>MANDREA, George</p> <ul style="list-style-type: none"> - Foișorul de Foc, București - The Fire Tower, Bucharest 	<p>NEGOGESCU, Alin</p> <ul style="list-style-type: none"> - Stațiile de metrou București - The Subway stations, Bucharest 	<p>MIHĂESCU, Nae C.</p> <ul style="list-style-type: none"> - Catedrala Sf. Nicolae, Sulina - The Holy Nicholas Cathedral in Sulina - Casa Mpa Bicicleta, București - The House of Mpa Bicycle, Bucharest
<p>IONESCU, Grigore</p> <ul style="list-style-type: none"> - Sanatoriul Toria, Ciuc - Toria Sanatorium, Ciuc 	<p>MANOLESCU, Șerban</p> <ul style="list-style-type: none"> - Ansamblul Amfiteatrului, Olmp - The Amphitheater Ensemble, Olmp 	<p>NEGOGESCU, Alin</p> <ul style="list-style-type: none"> - Stațiile de metrou București - The Subway stations, Bucharest 	<p>MIHĂESCU, Nae C.</p> <ul style="list-style-type: none"> - Catedrala Sf. Nicolae, Sulina - The Holy Nicholas Cathedral in Sulina - Casa Mpa Bicicleta, București - The House of Mpa Bicycle, Bucharest
<p>IONESCU-BERECHET, Dumitru</p> <ul style="list-style-type: none"> - Biserica Cașin, București - The Cașin Church, Bucharest - Primăria din Câmpulung Muscel - The City Hall, Câmpulung Muscel 	<p>MARCU, Dulliu</p> <ul style="list-style-type: none"> - Academia Militară, București - The Military Academy, Bucharest - Gara specială Băneasa, București - The Special Station, Bucharest - Imobil Alsea Modrogan nr.1, București - The Alsea Modrogan House, Bucharest - Palatul Consiliului de Miniștri, București - The Council of Ministers Palace, Bucharest - Teatrul Național, Timișoara - The National Theater, Timișoara 	<p>NENCIULESCU, Nicolae</p> <ul style="list-style-type: none"> - Grădina de vară Capitul, București - The Capitul Summer Garden, Bucharest - Palatul Regal, București - The Royal Palace, Bucharest - Grădiniile Regale, București - The Royal Gardens, Bucharest - Imobil Calea Victoriei, București - Building Victoria Avenue, Bucharest - Imobil Școlii Măgureanu, București - School Building in Măgureanu, Bucharest - Imobil de locuințe, str. Gral Berthel, București - Apartment Block in Paris Square, Bucharest - Ansamblul de locuințe din Piața Palatului, București - Apartment Block in Palace Square, Bucharest 	<p>MIHĂESCU, Nae C.</p> <ul style="list-style-type: none"> - Catedrala Sf. Nicolae, Sulina - The Holy Nicholas Cathedral in Sulina - Casa Mpa Bicicleta, București - The House of Mpa Bicycle, Bucharest
<p>IOTZU, Alexandru</p> <ul style="list-style-type: none"> - Teatrul din Craiova - The National Theater, Craiova 	<p>NOVIȚCHI, Ioan</p> <ul style="list-style-type: none"> - Stațiile de metrou București - The Subway Stations, Bucharest 	<p>OLTEANU, Toma</p> <ul style="list-style-type: none"> - Hotel "Forum", Costinești - Forum Hotel, Costinești 	<p>MIHĂESCU, Nae C.</p> <ul style="list-style-type: none"> - Catedrala Sf. Nicolae, Sulina - The Holy Nicholas Cathedral in Sulina - Casa Mpa Bicicleta, București - The House of Mpa Bicycle, Bucharest
<p>IOTZU, Constantin</p> <ul style="list-style-type: none"> - Palatul Asociației medicilor veterinari, București - The Veterinarian Association Building, Bucharest - Biserica Sf. Elefterie, București - The Elefterie Church, Bucharest 	<p>NOVIȚCHI, Ioan</p> <ul style="list-style-type: none"> - Stațiile de metrou București - The Subway Stations, Bucharest 	<p>OLTEANU, Toma</p> <ul style="list-style-type: none"> - Hotel "Forum", Costinești - Forum Hotel, Costinești 	<p>MIHĂESCU, Nae C.</p> <ul style="list-style-type: none"> - Catedrala Sf. Nicolae, Sulina - The Holy Nicholas Cathedral in Sulina - Casa Mpa Bicicleta, București - The House of Mpa Bicycle, Bucharest

Fig. 12. Architects included in the exhibition and their works.



NATIONAL BIENNIAL OF ARCHITECTURE BUCHAREST 2012



DULIU MARCU (1885 - 1966)

MARCU, Duiliu (23 March 1885, Cahul - 19 June 1966, Bucharest), architect and urbanist, personal life in Bucharest, studied in the Faculty of Architecture of the University of Bucharest, worked in the Ministry of Public Works, worked in the Ministry of Public Works, worked in the Ministry of Public Works, worked in the Ministry of Public Works...



ARHITECTI CREATORI DE PATRIMONIUM / ARCHITECTS CREATORS OF PATRIMONY

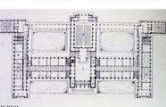
ACADEMIA MILITARĂ, BUCUREȘTI



Academia Militară din București a fost construită în anul 1912-1913, în stil clasic, de arhitectul Duiliu Marcu. Este un exemplu de arhitectură clasică din România...

Clădirea este construită în stil clasic, cu un fronton și coloane. Este un exemplu de arhitectură clasică din România...

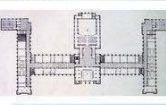
Clădirea este construită în stil clasic, cu un fronton și coloane. Este un exemplu de arhitectură clasică din România...



The General Military Academy was founded in 1912-1913, in a classical style, by the architect Duiliu Marcu. It is an example of classical architecture in Romania...

The building is built in a classical style, with a pediment and columns. It is an example of classical architecture in Romania...

The building is built in a classical style, with a pediment and columns. It is an example of classical architecture in Romania...



*Sursa foto: arhitectul Constantin Minulescu. Sursa foto: arhitectul Constantin Minulescu. Sursa foto: arhitectul Constantin Minulescu. Sursa foto: arhitectul Constantin Minulescu.

Fig. 14. Example of a panel in the exhibition, architect Duiliu Marcu.



Fig. 15. Example of a panel in the exhibition, Monument of the Romanian soldier, Carei.



Fig. 16. Vernissage of the permanent gallery at the “Ion Mincu” University of Architecture and Urbanism, at the National Architecture Biennale 2014.



Fig. 17. The permanent gallery.



Fig. 18. Presentation at the Romanian institute of culture, 2014, one of more of the kind.

4 Geographic spread of early reinforced concrete buildings / Maria Bostenaru, supervision Cristina Gociman⁷

The Modern movement was a global one in architecture, music, arts, physics, philosophy, economy and social theory, and industrialization in the first half of the 20th century. One of the nuclei of the ideology of this movement was the housing programme. This is a traditional programme, still, new technologies brought by industrial development, including reinforced concrete, were employed to investigate innovation. While in modern industrialized European countries the Avant-Garde went in the direction to tackle up the huge load of social housing, in some of the others the new possibilities were seen as an opportunity to give a new image to capital cities, allowing a reorganization of the urban tissue, which denser housing for the middle class in preferred zones. Following the Athens Charter (1933) function became a decisive component in the creation process. Functional requirements start with the social ones till technology. While connecting to the French models, a particular condition of the location namely that of seismicity, was neglected. Since then, capital cities where the Modern Movement is represented mainly by housing have been affected by earthquakes, which displayed the vulnerability of those buildings.

Zahariade⁸ sees to parallel movements in the Modern Movement:

1. The Western Avant-Garde, focused on the social requirement of the housing problem and the control of urban development of architecture. This includes the many “ism”s.

2. The ones which are also called “other Modernisms”: the evolutive tendency, organically, shapes which are gradually simplified towards those of the Avant-Garde. The local character is maintained, it never has the complete flexibility from the west, but it is adjusted to its aesthetical canons regarding geometry and the employment of the right angle.

Although the 4th CIAM Congress proclaimed in 1933 the Charter in the Greek capital, the Athens Charter has never been successful there. The

⁷ This chapter is adapted from the doctorate thesis of Maria Bostenaru Dan, under the supervision of Cristina Olga Gociman

⁸ A.-M. Zahariade: —Locuința în creația lui Horia Creangă!, în Uniunea Arhitecților din România: Horia Creangă, Catalogul expoziției organizate la împlinirea a 100 de ani de la naștere, București, 45-122, 1992.

housing needs requested something else. Without a social contribution the Greek interwar architecture was centered on housing and the apartment blocks are the “public face of Greek cities”⁹. The 1930s were a turning point in the history of housing in Greece, when the so-called “apartmentalisation”¹⁰ of Greece begun: the flat in a block became the housing model. Studying housing in Greece in the 20th century means for Constantopoulos¹¹ to study the phenomenon of the urban block of flats. New words appeared for these flat typologies. In Greece, like in Romania, there is a nostalgia of that time though, as observes Constantopoulos¹² which found its expression in research projects, publications and doctorates on the topic. We consulted for this work a volume edited by Condaratos and Wang¹³. For Romania we looked at monographs of architects such as Creangă¹⁴, Iancu¹⁵, Marcu¹⁶, Delavrancea-Gibory¹⁷ but also at the comprehensive work of Machedon & Scoffham¹⁸. In Romania, the first modern house was published 1927 by Marcel Iancu, but the first to receive an echo was the ARO block of flats by Horia Creanga from 1929, after which the Modern Movement became generally accepted. The 1900s architecture maintained its continuity, so Romanian architects touched more styles, from New-Romanian to Neoclassicism, Art Deco and Modernism. In the earthquake affecting Romania, one Modernist building with cinema collapsed in 1940 (Carlton, 1930-32, arch. G.M. Cantacuzino, which originally balanced the ARO building), and others in 1977 (Scala, ca. 1936, arch. Emil Nădejde,

⁹ A. Giacomacatos: —From Conservatism to Populism, Pausing at Modernism (The Architecture of the Inter-War Period), in: S. Condaratos, W. Wang (coord.): 20th Century Architecture – Greece, Prestel, Munich, 26-39, 1999.

¹⁰ E. Constantopoulos: —From City-Dwelling to Multi-Dwelling, in: S. Condaratos, W. Wang (coord.): 20th Century Architecture – Greece, Prestel, Munich, 79-88, 1999.

¹¹ Constantopoulos (1999)

¹² Constantopoulos (1999)

¹³ Condaratos, W. Wang (coord.): 20th Century Architecture – Greece, Prestel, Munich, 75-78, 1999.

¹⁴ Zahariade (1992)

¹⁵ UAR, Centenarul Marcel Iancu 1895–1995/Marcel Janco Centenary, Simetria: Bucharest, 1996.

¹⁶ D. Marcu, Arhitectură 1912–1960, Editura tehnică: Bucharest, 1960.

¹⁷ M. Sion: Henrieta Delavrancea Gibory - Arhitectura 1930-1940, Simetria, București, 2009.

¹⁸ L. Machedon, E. Scoffham: Romanian Modernism: The Architecture of Bucharest, 1920-1940, MIT Press, Cambridge MA, USA, 1999.

balancing the cinema by Fränkel and Casata, ca. 1936, arch. Jean Văleanu, a vertical accent). The buildings replacing them do not have the same quality. An exception was the ARO building, where the cinema was recently restored after a fire¹⁹. The Ambassador and ARO buildings form an impressive complex maintained after earthquakes and they are protected as monuments according to current legislation. The strategical position of the ARO building was decisive in influencing architects which constructed modernist landmarks on the boulevard. Other buildings have been damaged by the earthquake, for example Turist, before imobilul Palladio (1936, arh. Marcel Locar), the corner of which was reconstructed.

Interwar and earlier architecture in Italy between 1890-1940 was investigated by Etlin²⁰. The particular movement of Novecento Milanese was the subject of Burg²¹. For the most important architect of the time, Giuseppe Terragni, we looked to monographs, such as that by Zevi²² and Libeskind²³. For Portugal, we consulted a volume edited by Tostões and Wang^{24,25,26}. We included more references in the study trips part of this work, with the literature used for making the respective tours.

4.1 The emergence and spread of reinforced concrete, from the contribution of industry until the approach to housing

Concrete was known since the antiquity, and it was used at the Pantheon in Rome. The ruins in Ostia Romana tell us this story, of the construction

¹⁹ Prager (1979)

²⁰ Richard Etlin: *Modernism in Italian Architecture, 1890-1940*, MIT Press, Cambridge, MA, 1991.

²¹ A. Burg: *Stadtarchitektur Mailand 1920 - 1940 : die Bewegung des Novecento Milanese um Giovanni Muzio und Giuseppe de Finetti*, Birkhäuser, Basel/Berlin/Boston, 1992.

²² B. Zevi, Giuseppe Terragni, Verl. für Architektur Artemis: Zürich, 1989.

²³ D. Libeskind, P. Rosselli, A. Terragni: *The Terragni Atlas: Built Architecture*, Skira editor: Milan, 2005.

²⁴ R. Henriques da Silva: „Die ‚Casa Portuguesa‘ und die neuen Programme 1900-1920—, in A. Becker, A. Tostões, W. Wang (coord.): *Architektur im 20. Jahrhundert – Portugal*, Prestel, München, 15-22, 1997.

²⁵ M. Souza Lôbo: „Stadtkultur und Landschaft—, in A. Becker, A. Tostões, W. Wang (coord.): *Architektur im 20. Jahrhundert – Portugal*, Prestel, München, 111-116, 1997.

²⁶ J. Vieira Caldas: „Fünf Intervalle über die Zweideutigkeit der Moderne—, in A. Becker, A. Tostões, W. Wang (coord.): *Architektur im 20. Jahrhundert – Portugal*, Prestel, München, 23-33, 1997.

techniques (*opus cartaeicum*). According to Prager²⁷ the first construction which uses the logics of reinforcing concrete in assembling stone blocks was the Pantheon in Paris, arch. Rondelet (1770).

Unfortunately reinforced concrete is not seen as historical construction material by many researchers, unlike historic masonry. Our work is a contribution to see why the study of reinforced concrete buildings from the pre-seismic-code period is important, in the prewar and interwar times, not only from postwar times, for which research exists.

In the approach in the philosophy of materials, treated by Bostenaru²⁸, the real employment of reinforced concrete deserves a separate approach. At the begin the Hennebique system was used. In the drawing of the patent for the Hennebique system a network of primary and secondary beams out of reinforced concrete is visible. This is a characteristic which was later not kept, when the hierarchy between primary and secondary was mixed. The German language differentiates between this early reinforced concrete (iron-concrete) and the later version (steel-concrete).

In the 19th century more reinforced concrete systems were created after the arrival of Portland cement (1824), based on the invention by Monier (first experiments 1840, patent 1867), but Hennebique got remarked introducing the system of plates sustained by principal and secondary beams which could become a constructive system (patent 1892). The first reinforced concrete building was a deposit (1868 Croissy, France), the first bridge was built 1875 (Chazelet, France)²⁹. The first building entirely in reinforced concrete was on Rue Danton 1, Paris (1889-1900).

Reinforced concrete became recognized as construction material at the universal exhibition in Paris in 1900. After the collapse of the imperial hotel in Nice construction codes were published (Germany 1904, France 1906, Switzerland 1910) and university courses started to be taught (the first at École Nationale des Ponts et Chaussées, in 1897) after which patents were given up³⁰. This would explain the transition to the skeleton structure.

The Hennebique office was based in Brussels and from there spread to Europe and outside it. So, in Italy representative of the Hennebique system

²⁷ Prager (1979, p. 43-44)

²⁸ Bostenaru (2012)

²⁹ R. Grima López, A. Aguado de Cea & J. Gómez Serrano: Gaudí and reinforced concrete in construction, *International Journal of Architectural Heritage: Conservation, Analysis, and Restoration*, DOI:10.1080/15583058.2011.632470, Available online: 19 Oct 2011

³⁰ Grima et al. (2012)

was Porcheddu, with the headquarters in Turin and active in whole Italy, more so in the North³¹. The Lingotto FIAT factory is one of the examples which gained importance, also through today's conversion by Renzo Piano and the integration into the Olympic Games. In Genua, a boulevard was traced at the transition from the 19th to the 20th century, with buildings built in the Hennebique system: Via XX Settembre. In Bucharest there is a similar boulevard with reinforced concrete construction, but in skeleton structure, not Hennebique, done in the interwar time, in Modernist style: the Magheru boulevard.

In Great Britain it was Mouchel and in Germany Züblin who applied the Hennebique system³².

Recently, the Technical University in Vienna analysed an example of application of the Hennebique system using also precast elements imported from Belgium outside Europe: the Baron palace in Cairo³³.

Different from Italy, in Romania the Hennebique system did not spread, reinforced concrete came to be applied at large scale suddenly in the interwar time, with the possibilities of the material not researched sufficiently. An early example of reinforced concrete in Hennebique system is Athenée Palace in Bucharest, by the French origin architect Daniel Renard (1910/1912) and the notable Romanian civil engineer George Constantinescu, a student of Anghel Saligny. This was the first building in Bucharest with reinforced concrete structure. Daniel Renard is also the author of another representative Art Nouveau style building on the territory of the old kingdom in Romania: the Casino in Constanța, on the Romanian seaside (1909). The engineer George Constantinescu conceived also the structure for the first reinforced concrete building in Romania, the mosque in Constanța and for the Casino. Athenée Palace was altered in the interwar time with an intervention leaning at Italian Novecento, by the architect Duiliu Marcu, in 1937 (Fig. 20).

Reinforced concrete was employed for the first time in Romania in 1888 by the engineer Anghel Saligny for the construction of cereals silos in the harbours Brăila and Galați, in Monier system, constructions of particular

³¹ R. Nelva, B. Signorelli: *Avvento ed evoluzion del calcestruzzo armato in Italia: Il sistema Hennebique*, Associazione Italiana Tecnico Economica del Cemento, Edizioni Di Scienza E Tecnica ~ Milano, 1990.

³² D. McBeth: *Francois Hennebique (1842–1921) – Reinforced concrete pioneer*, Proceedings of the Institution of Civil Engineers, Londra, 1998.

³³ <http://www.baronpalace-project.net/>

importance for the development of Romanian engineering³⁴. The first civil building with multiple floors was the building of the C.F.R. housing in the Sinaia train station³⁵.

Some of the Romanian architects, such as Virginia Haret, the first woman architect, adhered at the New-Romanian style, despite a stay in Italy, before starting the search for Modernism. Interesting the activity of Virginia Haret is the attribution of the first apartment block in reinforced concrete in Romania, the one on Frumoasa street. This block of flats has a different style of New-Romanian and Modernism, is in eclectic style³⁶ and so the authorship of the block was contested. Virginia Haret also designed industrial constructions in reinforced concrete at the start of the century, like the water tower in the courtyard of the Faculty of Medicine (1927), demolished later on (Fig. at the form on the architect).

One pioneer woman was also active in Hungary in employing reinforced concrete: Eszter Pécsi.

Reinforced concrete employed first in industrial architecture was also a characteristic of Portugal, the case in which Moreira de Sá & Malevez (MS & M) were Hennebique agents³⁷.

Despite this, the Riga architecture enumerates these industrial buildings in its Art Nouveau heritage, for example the water tower at Agenskalns, on Alises 4 by Wilhelm Bockslaff, an example of National Romanticism (1910)³⁸

Hennebique himself, at the own house, employed shapes of industrial architecture.

In other parts of Romania, such as Transylvania, uses of the Hennebique system in Art Nouveau were found: in Oradea, the city of József Vágo, one of the architects who brought the experience from this place to Italy: the

³⁴ Prager (1979), p. 52-58

³⁵ Prager (1979), p. 59

³⁶ R. Bem: „Imobilul de Locuințe de pe Strada Frumoasă 50-56 (1925-28)”, în A. Beldiman și C. Woinaroski (coord.): *Arhitectura Bucureșteană sec. 19 și 20*, editura Simetria ArCuB, București, 2000.

³⁷ A. Tavares: —The Effects of Concrete on Portuguese Architecture: the Moreira de Sá and the Malevez Case (1906-1914)”, *Proceedings of The Second International Congress on Construction History*, vol. 3, Construction History Society, pp. 3041-3059, 2006.

³⁸ Rīgas kultūras aģentūra: *Art Nouveau in Riga*, Rīgas Jūgendstila Centrs, Riga, 2008

palace Moskivits Miksa, in Secession München style, the so-called Lilienstil³⁹ (Fig. 21), with close relationships to Hungarian architecture.

Also in Finland Art Nouveau style was practiced in this time of history (Fig. 22).

Reinforced concrete, probably in Hennebique form, is documented, also in the archives of the works of Béla Lajta in Budapest⁴⁰, underlining the light play of the skeleton at the lower levels and of the heavy façade with holes in the load bearing masonry at the higher levels, as in Loos architecture. This can be precursory of the seismically vulnerable flexible ground floor in the Bucharest interwar language. In the 21st century Italian architecture with Western European Modernist influences inverted this situation of the prototype in L'Aquila of the pillar ground floor in Le Corbusier style, free and with the destination of parking, adapted to a sloped terrain, but presenting seismic isolation at the basis. It is remarkable that mistaken approaches with the jacketing of these columns at the ground floor can lead to ductility differences.

In the Viennese architecture let us not forget the contribution of Joze Plecnik with the first church in reinforced concrete, with the skeleton placed in the basement, for which the architect found an own language, which brings to expression the difference between a spatial structure and multistory building. Despite this, in the native city of Ljubljana Plecnik built little in reinforced concrete, there masonry was prevalent (Fig. 23).

In Spain Portland cement existed from the second half of the 19th century, first time being constructed with it in 1848 in Bilbao on the Northern coast. In August 1884 the Monier patent was recorded for its employment by Lecanda Macià y Compañía for water towers⁴¹. The first project in reinforced concrete was such a water tower in Puigverd in Lleida, 1893⁴². One of the first cement factories was Asland in Barcelona of Eusebi Güell in 1901, the mecene of Gaudí. The Hennebique patent was employed for bridge construction until the own method was patented. The first building fully built in concrete was an industrial one, the mill in Badajoz (1899) and used the Hennebique patent. For the housing buildings which did not have such large spans patents were too expensive at the begin. In Catalonia it was

³⁹ M. Paşca: Arhitecții József și László Vágó la Oradea, Arca, Oradea, 2010 (ed. a 2a)

⁴⁰ T. Csáki: Lajta Béla Virtuális Archívum <http://lajtaarchiv.hu/>

⁴¹ Burgos (2009), apud Grima et al (2012)

⁴² Cañadas (2006), apud Grima et al (2012)

first employed for hotels and shops (1909-1919) but also for housing 1912-1914 through Juan Miró Trepas/Construcciones y Pavimentos S.A.⁴³.

Grima⁴⁴ identifies from the 183 patents in Spain that the one of Habrich, from German origin, was the one known to Gaudi. This approach is new, as till then the employment of reinforced concrete by Gaudi was negated, with the argument that Gaudi's architecture requested traditional materials close to nater. But with Gaudi's activity being contemporary with the development of reinforced concrete, this could not remain foreign. Reinforced concrete was employed at Bellesguard, the Nativity Façade of Sagrada Familia, but mainly in the Guell park (Fig. 25) as well as the Jardinières viaduct and the Artigas gardens. We underline thus a new employment of reinforced concrete, in landscape architecture. But in facades which would suggest the material tectonics, such as Casa Milà only the envelope was chosen to suggest concrete. In case of the contemporary finishing of Sagrada Familia reinforced concrete is experimented to create the shapes designed by the architect ().

Reinforced concrete enjoyed an inequal spread in Europe. Such, in Germany, although it was experimented with reinforced concrete, a large spread enjoyed also steel, for which there were resources. Reinforced concrete was more adopted where there weren't so reach resources. Many interwar buildings in Germany have a steel structure, such as those of Otto Hässler in Karlsruhe (Fig. 26) and Celle, or thos of Mies van der Rohe in Stuttgart. In "Weisse Vernunft" (White Rationale), an interactive CD ROM of the State School of Design in Karlsruhe the innovative construction techniques in reinforced concrete, steel and glass from the interwar time in Germany are documented. It is to be discussed the relationship between reinforced concrete – steel structure at the retrofit of the Telephone Palace in Bucharest, Romania, and the relationship to metal structure which was typical for Germany in Fränkel's building Adriatica in Bucharest, the local culture of such a structure. Later on we will see the relationship between the frame structure in reinforced concrete (or metal) of the first half of the 20th century compared with the traditional construction with timber skeleton.

With this structure the multistory luxury housing buildings in the centre of some major cities were constructed, such as Bucharest, Milan, Athens, Lisbon. Luxury buildings were not the major current of the Avant-Garde, so also in this field research is needed.

⁴³ Grima et al (2012)

⁴⁴ Grima et al (2012)

Before being applied “en masse” in the seismically vulnerable zones of Europe reinforced concrete reached France. A pioneer of the reinforced concrete construction was Auguste Perret, and his contribution is significant because the French typological model of the *immeuble de rapport* in a built front was also adopted in Romania, with the recesses at higher levels etc. Perret also built the Champs Elysees theatre in Paris, remarkable for the language relationship with one of the authors of the essays about reinforced concrete: István Medgyaszay (Fig. 25). „Immeuble de logements Rue Franklin”, designed and built by architect Auguste Perret, 1903-1904 (Fig. 25) is the forerunner of the most exemplary derivatives of the so-called interwar style in Romania. Further on, “immeubles” in Paris at the begin of the century display similar characteristics to the interwar Romanian ones regarding the features of integration in the urban structure and the functional features. And not only. Also, while the employment was usually to do computations according to the norms which came from France (as written by Prager, 1979) or from Germany. The German circular from 1925 was the most used one, although considered by design for gravity loads only. Such, constructions with reinforced concrete skeleton resulted. In Germany, the vulnerability of Romanian interwar constructions was researched from a point of view which combines geology and engineering knowledge⁴⁵. Architectural issues and the portability of the present regulation are not included. „Immeubles du beton” from the begin of the century in Paris, or, in time, from interwar Romania, represent the same architectural features. And they are buildings of cultural value. The DOCOMOMO association has as scope the “documentation and conservation of buildings, sites and neighbourhoods of the Modern Movement”. Despite this, again, so few have concrete as structural material of the building, or at least are documented as such. Recent research of the author had little success in looking for such buildings in Slovenia, an earthquake prone country, which gave architects of international dimension of an own style, with elements of the Modern Movement. Especially in what regards housing units. Also in Germany innovative buildings in “pure iron-concrete frames” of the Modern Movement are not known to the author.

The buildings of the modern Avant-Garde were raised in a short time, of 20 or maybe just 10 years, in which many styles co-existed (Fig. 28), also with the newest discoveries in philosophy, sociology, physics but also industrial and technological development. The employment of advanced construction technolog of the time was common, but not always the possibili-

⁴⁵ Sonderforschungsbereich 461 “Starkbeben”, University of Karlsruhe

ties of materials and systems were researched enough. The state of research referred principally to the innovation of the façade, since the Modern avant-garde looked for such a new style. The new technologies brought by industrial development were a central part of the world movement in that time. Such, one of the nucleus of the movement was the housing programme, which was particularly suitable to investigate innovation. While in more industrialized countries ways to solve social problems were looked for, in other European countries the new possibilities were seen as an opportunity to give a more prosperous image to cities, raising the density of housing for the middle class. The followed principles were the refusal of a senseless ornamentation, the employment of modern materials and construction ways, the study of new typologies connected to function and particularly a radical innovation in housing construction. The employment of reinforced concrete skeleton made it possible that different plans are designed at superposed floors. Different of the case of the International Style, the individuality of architecture and of the individual apartment was conserved, also in cases like the *stappelle villa* or the serial plan.

A lesson to be re-evaluated according to the new understanding is how traditional constructions behaved better in earthquakes than modern structures. This was attributed to the so-called local seismic culture. The new understanding took into account the fact that the urban way of life led deliberately to these improvements. During the earthquakes in Turkey in 1999 the traditional timber skeleton buildings called “*himiş*” behaved better than the modern structures in reinforced concrete⁴⁶. According to Lachner⁴⁷ timber constructions can be classified in bloc constructions, column-beam construction and column-bloc construction. At least the latter two have a frame structure. But the buildings with timber construction are not characteristic for with the earthquake prone zones. In earthquake prone zones, as Romania, bloc typologies were adopted, as in the Tatra mountains and thus without fully using the structural characteristics of timber. In coastal zones like Lisbon and Istanbul it can be due to the industrial vicinity of naval industry.

The blossom of multistory reinforced concrete buildings started in France, like the gothic for churches, and was accompanied by innovative solutions for these, like the landmarks of Le Corbusier. Although churches

⁴⁶ P. Gülkan, R. Langenbach: —The Earthquake Resistance of Timber and Masonry Buildings in Turkey, in: Proceedings of the 13th World Conference on Earthquake Engineering, Vancouver, 2004, Paper #2297, 2004.

⁴⁷ C. Lachner: *Geschichte der Holzbaukunst in Deutschland*, E. A. Seemann, Leipzig, 1887.

have a ship structures, at least at the level of spatial organization, the lateral forces, considered in their design (wind) were not always taken into account at the design of reinforced concrete buildings. On turn, in Vienna, reinforced concrete enjoyed priority with regard to timber and steel, invoking a tradition in stone construction⁴⁸, rather than in timber.

At the level of interior space, the ceiling was modeled in structural dependence of the ship in case of gothic churches. In the stone gothic churches the cage structure to be found in the timber frame of “gaiola” (cage) pombalina from the post 1755 earthquake reconstruction in Lisnon can be recognized in the spaces called “ships” of the building. In the reinforced concrete church Holy Spirit of Jože Plečnik, especially in the most innovatie space, the cripta, more levels of reinforced concrete in spatial frames are prefigured. The stone constructions in gothical style had in common with the timber structure and previously shown building the structure-frame span. Stone constructions in gothic style, also, had in common with the reinforced construction which followed the same structure-opening span. The philosophy behind the employment of reinforced concrete was different in this case of that of timber. So, spatially, tridimensional structures, as were those in ston in the gothic, are typical for reinforced concrete. The “reinforced concrete skeleton” spread later than the Hennebique structure which was an early structure in “reinforced concrete frame”, before of what we know today in shape of “seismic codes”. Before, the adoption of the frame (in Greece or Italy) seemed to come from the existing urban structures, talking of the regulated frame of parcels.

Two buildings with reinforced concrete structure from the first half of the 20th century in Vienna and Bucharest, the Zacherl house and the Patria bloc of flats have a related stylistic language, but the building in Vienna hast a spatial structure of reinforced concrete frames, different from the building in Bucharest, which has a structure in reinforced concrete skeleton, with secondary beams.

Between the two programmes, sacre and residential, an exchange of architectural and structural language took place. Italy features several churches of the interwar time as the chapel at Sapienzia campus, or that in the north by Piacentini.

The design of spatial structures is similar to a laboratory where the possibilities of the new material are researched and in which lessons for multi-

⁴⁸ A. Becker, D. Steiner, W. Wang (coord.): *Architektur im 20. Jahrhundert: Österreich*, Prestel, Munich, 1995.

story constructions are learned. Such lessons for employing the material have to be learned also for concrete.

Another aspect connected to the traditional modern dialogue is the development of national states in the time of Modernity and of the introduction of reinforced concrete. Such, reinforced concrete was also used for the construction of public institutions. Less in Romania, but more in Italy it was also used in the architecture of expo's, a contemporary occasion to introduce multimedia elements in the perception of memor in intervention, which migrates also towards common buildings.



Fig. 19. Romantic nationalism, one of the Art Nouveau styles in Riga, Latvia. Apartment block, Elzens Laube, Alberta Street 11 (1908). Photo: M. Bostenaru, 2011.

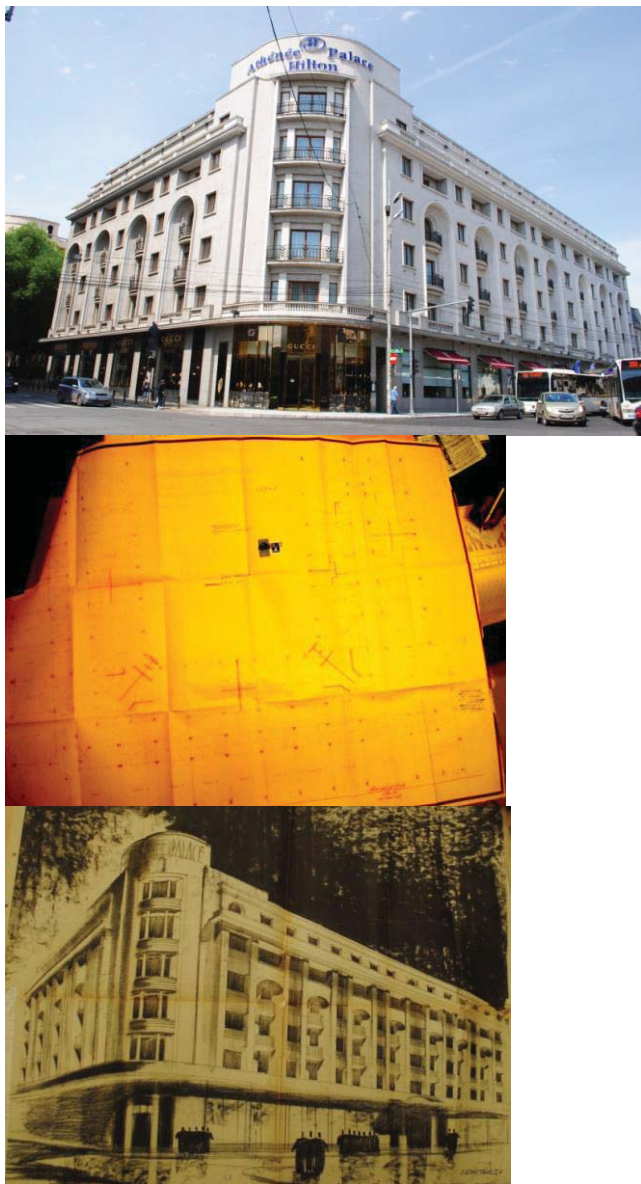


Fig. 20. Athenée Palace, Bucharest. Initial design: Arch. Daniel Renard (1910-12). Converted into interwar architecture by Duiliu Marcu (1925-27). Photo: M. Bostenaru, 2011, archive plan and perspective: Bucharest Town Hall archives

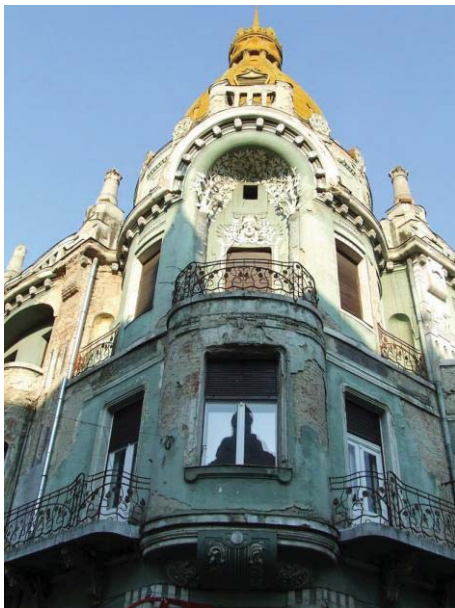


Fig. 21. Moskivits Miksa palace, architect Kálmán Rimánoczy jr. (1904-1905), Oradea. Photo: M. Bostenaru, 2009.



Fig. 22. Art Nouveau neighbourhood in Helsinki, Finland. Urban assembly on the Huvilakatu street. Photo: M. Bostenaru, 2009.

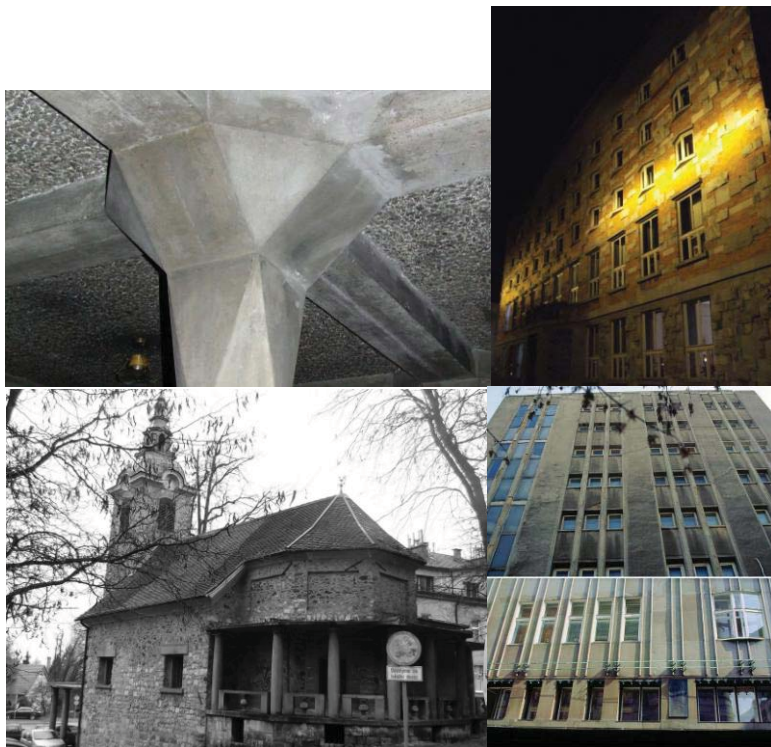


Fig. 23. Joze Plecni architecture in reinforced concrete, Vienna and Ljubljana. Holy Spirit church, Herbststreet 82, Ottakring, Vienna (1908-1913). National and University Library, Turjaška 1, Ljubljana (1930-36). Saint Bartolomew church Celovška Street, Ljubljana (1933-38 –completions to existing medieval part). Zacherl house, Bauernmarkt 7, Wildpretmarkt 4, Vienna (1904-1905) compared to Patria block of flats, Bucharest, arch. Horia Creangă (1929-31). Photo: M. Bostenaru, 2002, 2005, 2008.



Fig. 24. Parc Güell, arch. Antoni Gaudí (1900-1914). Entrance pavilion, place and viaduct. Photo: M. Bostenaru, 2011.

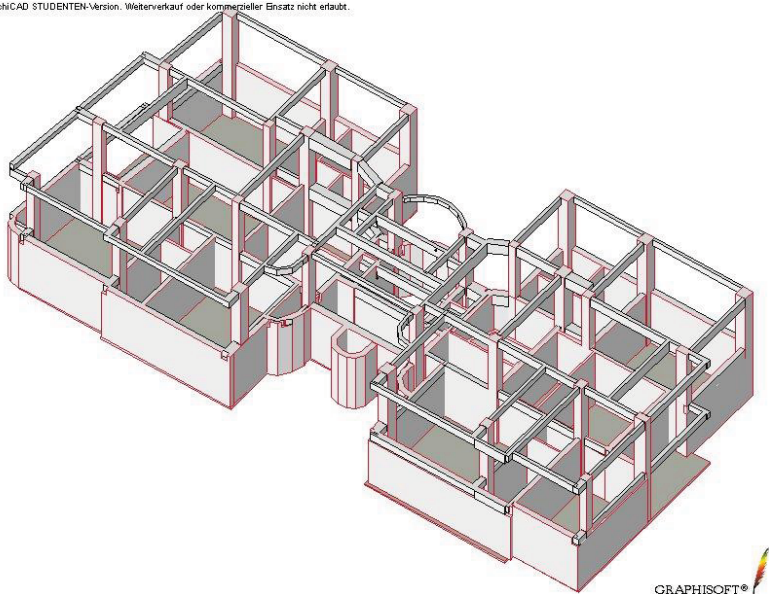


Fig. 25. Architecture of early reinforced concrete in France: Auguste Perret, Paris. Block of flats 25 bis Rue Franklin (1903-1905), Theatre Champs Elysees, 15 Avenue Montaigne (1911-13) (conceived initially by Henri van de Velde). Photo: M. Bostenaru, 2010.



Fig. 26. Interwar architecture with metal skeleton in the Dammerstock Siedlung, Karlsruhe, Germany (arch. Otto Haessler, 1929). Photo: M. Bostenaru, 2002.

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Fig. 27. The entrance of reinforced concrete into interwar Romania.



Fig. 28. Czech Cubism. House of the Black Mother of God, Prague. Arch Moskivits Mi-ksa palace, architect Josef Gočár (1911-12) Celetná Str. amd Ovocný trh. Photo: M. Bostenaru, 2008.

4.2 The urban and architectural resonance of the introduction of early reinforced concrete

This book presents a comparative overview of the early 20th century architecture in Europe together with conservation approaches to put in value this architecture in the respective countries. A close view is dedicated to the employment of reinforced concrete.

The multistory construction had urban resonance together with the raise of height, in order to satisfy hygiene requirements, promoted among others by the Avant-Garde, the distance between fronts raised, and this way new boulevards were defined, as for example in Bucharest, or it was built in the periphery, in large green spaces, as in the West of Europe. The tracing of new boulevards, superposed on the organic grid of streets led to parcels with irregular contour, reflected then in an irregular grid in the disposition of partition and structural elements of the buildings, cause for their seismic vulnerability in Bucharest. In other countries, such as Greece or Portugal, the boulevards were traced at the extension of the city, for example towards facilities of the time such as the train station, and as such the buildings have a regular structure.

The type of building in our research was conceived to raise density in the centre of the cities. More even, Sonne⁴⁹ observes when analyzing the typology of block of flats, that these have a sustainable typology, a viable model for urban development today. Sonne⁵⁰ follows typologies with an atrium, in order to conserve green spaces and a better adaptability to climate change, taking into account the difference in function, although the difference in climate in the countries considered is not highlighted. In the Sonne⁵¹ research the following typologies in Western Europe and North America are considered:

- Berlin and Germany
- Vienna for Central and Eastern Europe – some examples from Prague, Budapest, Switzerland and Russia,
- Amsterdam and the BeNeLux (namely Rotterdam)
- Copenhagen and Skandinavia,
- Paris and France,
- Milan and Southern Europe, namely Spain,
- London and Great Britain,
- New York and the USA (Chicago).

Our research instead went out from a seminar at the University of Karlsruhe on early 20th century architecture in Eastern Europe. Thus, exactly countries missing in the research by Sonne⁵² are covered, Romania, Greece, Slovenia, Portugal, Estonia, Latvia to name just some examples. Italy is a common point, with the “Novecento” and the “ambientismo” architecture. Hungary is only touched.

The attitude towards the Modern Movement is different in Europe. At the IV Congrès Internationaux d'Architecture Moderne in 1933, the Charter of Athens was proclaimed, and later documented by Le Corbusier. This put the basis for rational cities, the key concept being the strict separation in zones for the four “functions”: housing, work, loisir and circulation. These concepts were employed on large scale for the reconstruction of European Cities after WWII, in the “functionalist” style. In the interwar time, even before WWI, such housing was developed experimentally, in the difficult tasks of economic efficiency. New technologies such as reinforced concrete were employed. The begin of the 20th century disposes the difference between the

⁴⁹ W. Sonne: Dwelling in the metropolis: Reformed urban blocks 1890–1940 as a model for the sustainable compact city. *Progress in Planning* 72 (2), 2009, p. 53-149

⁵⁰ Sonne (2009)

⁵¹ Sonne (2009)

⁵² Sonne (2009)

non-west of the predominantly Western Modernism. Generally accepted, Modernism is a historical phenomenon manifested in a linear history between two peak moments which define it: the interwar time and the postwar time, even if “other modernisms” continue to exist. Such “other” Modernisms existed also parallelly to the principal modernism flux. It is a question of frontiers, not only theoretically, temporally and aesthetically, but also geographically / cultural barriers. There is a conditioned dependency between the geographic and the chronological limits – this way Eastern Europe had forerunners in the buildings built before WWI in Central and Western Europe. Same happened in the second half of the 20th century, even if the reasons were different, looking for expression. At the same time, Western Europe saw the development of so-called participatory architecture, while during Eastern Europe totalitarianism mass housing was built. Practically, in today’s architecture, we can see the reaction to the architectural approaches differently seen in the spread of functionalism in postwar time, when the ideals from the begin of the 20th century of the Avant-Garde made place to mass housing. The Western architecture of Italian rationalism has in common with Eastern Europe the European Modernism in Greece and Romania, the contextualism: its buildings were not raised at the periphery, but in the city. Milan is a product of the 1930s as are the main boulevards in Bucharest. The section in central Bucharest is unique in Europe, while the Milan works are spread close to the central railway station similarly to Athens, but the position of the building in context builds a difference in approach to Germany, for example. In France, this approach which served as a model for Romania was spread before WWI.

In Western Europe innovation was done in social housing, at the periphery, in the so-called Siedlungs. An exception are the Viennaise Hofs (Fig. 29), but also these are a typology many times neglected in architecture history. A typology close to the Viennaise hofs we find in Warsaw (Fig. 30). Housing was a major contributor to interwar architecture, a pioneering programme, shaping architects’ careers, emancipating society and remodeling the urban tissue, but, for example in Greece, innovation was done also in school buildings.



Fig. 29. Reismann Hof, architects Heinrich Schmid&Hermann Aichinger (1924-25). Matteottihof, listed, urban assembly together with Metzleinstaler Hof and Herweghof architects Heinrich Schmid&Hermann Aichinger (1926/27), Vienna. Photo: M. Bostenaru, 2009.



Fig. 30. Interwar architecture in Warsaw, where there was also a variation of the Viennaise Hofs (right). Block of flats Ul Jaworzyńska arch. Helena and Szmon Syrkus (1937) (left). Photo: M. Bostenaru, 2011.

5. 7 years dedicated to the conservation of the Modern Movement heritage
The Conference Series “Das architektonische Erbe – zum aktuellen Umgang mit den Bauten der Moderne” (Architectural heritage – about the contemporary approach to the buildings of Modernity
Karlsruhe, Germany
2004-2010 / Alex Dill (conference), Maria Bostenaru (review)⁵³

5.1 Introduction

Between years 2004 and 2010 a series of seven conferences took place in Karlsruhe, Germany, on the conservation of architectural heritage throughout Europe. Aimed primarily at practicing architects, they were organised by Alex Dill, from the Faculty of Architecture, together with DOCOMOMO (international committee for DOcumentation and COnservation of buildings, sites and neighbourhoods of the MODern MOVement) and Beton Marketing Süd. It was also the framework in which the German chapter of DOCOMOMO was re-launched in 2006 and a declaration adopted. The countries in focus were Germany, Russia, the Netherlands, Italy, Czech Republic, France, Sweden/Scandinavia and Great Britain. The opening and closing conferences focused on Russia, for which lessons should be learned from the functioning practice in conservation in Western and Central Europe. Outreach activities were accompanying exhibitions, books releases, meetings of the DOCOMOMO chapter, and related conferences. In 2011 the series will be discontinued, being replaced by a conference on architecture theory: “Authenticity”.

⁵³ This paper has been first published, under Creative Commons licence, by Maria Bostenaru Dan, in the e-conservation magazine ISSN: 1646-9283, 18, 2011, p. 19-26, <http://www.e-conservationline.com/content/view/977>

In 2004-2010, a series of one-day conferences, always on Fridays, took place at the University of Karlsruhe, Germany, in cooperation with DOCOMOMO and supported by Beton Marketing Süd, as research initiative of the university. The topic of the conference was how to preserve and use cultural heritage buildings of the Modern Movement which define the face of today in many European cities. Organiser was architect Alex Dill, academic counsellor, from the Institut für Baugestaltung, Baukonstruktion und Entwerfen 2 (Institute for Building Configuration, Building Construction and Projects 2) (2004-2007). Each conference was accompanied by an exhibition focused on heritage of Modernity in the respective geographic zones, the vernissage of which took place in the evening. Starting with 2006 when the German DOCOMOMO committee was redefined, the days after the conference were reserved for the meeting of the committee's German chapter. The conferences were recognised by the chamber of architects as continued learning events for professionals, although they were also open to the general public. The first three conferences focused on the differences in the approach in Western and Eastern Europe, having in focus a country from each. The following conferences focused on one country each. We attended all conferences, except for the opening and closing ones.

5.2 Russia and Germany

The first conference took place in January 2004 and it focused on the challenges for architecture of Modernity in Russia and Germany in a comparative approach. The approach was, as the conference proved, fundamentally different – the preservation practices from the West did not reach Russia and the buildings of the Russian constructivists, which are of fundamental importance for the history of architecture, were first documented and preserved in form of study models. It was also an occasion to compare the different terms of Avant-garde, Modernism and Modernity. At the time the buildings were erected, there were more common features in the new practice than today in conservation. Of use for the conference was the cooperation between the University of Karlsruhe and Russian specialists, some of which were visiting scientists in Karlsruhe for several years, such as Dr. Sergej Fedorov, also co-organiser of the conference. The conference was advertised on the German internet portal of construction news BauNetz (http://www.baunetz.de/meldungen/Meldungen_Ausstellung_und_Tagung_in_Karlsruhe_15675.html). It was accompanied by an exhibition on architecture models of the Russian Avant-garde, a cooperation project of the students from Karlsruhe and of the University of Stuttgart. The conference

took place on the last day of the exhibition. Among the subjects approached were Russian Constructivist buildings from St. Petersburg and Moscow, the house Schminke in Löbau⁵⁴ and the preservation and maintenance of Béton brut (Sichtbeton). Later on, Rüdiger Kramm published a book on this topic⁵⁵, as accompanying publication of the conference series.

5.3 The Netherlands and Russia

The second conference took place in October 2004 on the subject of the architecture from the Netherlands, with some contributions about Russia and Germany („Rettung vor dem Zerfall. Tagung an der Fakultät für Architektur zur Erhaltung moderner Bauten“, Press communication at <http://www.uni-protokolle.de/nachrichten/id/89816/>). Continuing the intentions of the first conference to facilitate the exchange and encourage the preservation of the buildings of the Modern Movement all over Europe, a delegation of the Moscow Institute of Architecture took part in the conference. The chair of the working group on Technology of DOCOMOMO, Wessel de Jonge, presented the restoration of the Sanatorium Zonnestraal in Hilversum (the Netherlands). From the interesting problematic regarding the restoration of the sanatorium, we can mention the replacement of the windows that had to be made out of a special glass in order to reflect similarly, so the sand to produce them sufficiently transparent even in double glazing was imported from the Baltic states. There was also a presentation of the dean of the faculty Prof. Matthias Pfeifer on structural restoration of buildings in Germany. The corresponding exhibition displayed the work of Konrad Wachsmann, a German architect who immigrated to the US and was a pioneer of the prefabricated construction. The University of Karlsruhe has a database on German architects who were active outside Germany (Architekten im Exil 1933-1945 <http://www.ikg.uni-karlsruhe.de/projekte/exilarchitekten/>).

5.4 Italy (and Czech Republic)

The third conference took place in January 2006 and it focused on Italy, with Eastern/Central Europe presentations about the Czech Republic. It was the year when DOCOMOMO Germany was newly defined, occasion to

⁵⁴ Berthold, Burkhard (ed), „Scharoun. Haus Schminke: Die Geschichte einer Instandsetzung“, Karl Krämer Verlag Stuttgart + Zürich, 2002

⁵⁵ Rüdiger, Kramm and Tilman, Schalk, „Sichtbeton, Betrachtungen“, Vbt Verlag Bau U. Technik, 2007

have the vice-chair of DOCOMOMO international, Prof. Maristella Casciato, among the speakers. Maristella Casciato gave an overview talk on the research and practice of restoration in Italy. It was followed by two case studies:

- the case of “Lingotto”, a hierarchical model, by Christiana Chiorino from the Polytechnic University of Turin. The author conducted research on the preservation of Pier Luigi Nervi buildings in the context of the XX Olympic Winter Games held in Turin in 2006, focusing on the approach of reinforced concrete and defining some criteria on which buildings should be preserved for their structural characteristics⁵⁶⁵⁷;

- the case of “Ivrea”, a dynamic model, by Enrico Giacomelli. Recent efforts of the presenter, together with Patrizia Bonifazio, are taking place to include the city of Ivrea on the UNESCO World Heritage List^{58 5960}. For this purpose, International Summer Schools focused on the architecture and urbanism are being organised (<http://www.issivrea.it/>). An open sky museum of modern architecture (Museo a cielo aperto dell'Architettura Moderna di Ivrea) exists in Ivrea since 2001 to promote cultural tourism for the valuation of this heritage (<http://www.maam.ivrea.it/>).

After the lunch break, two case studies from the Czech Republic were presented: the Villa Müller in Prague, by Petr Urlich from the Czech Technical University, about research and practice of the restoration; and Villa Tugendhat in Brno, on which two presentations were given. The first was by Iveta Cerná about the history of the building and the other by Prof. Ivo Hammer from the University of Applied Sciences and Arts (HAWK) at Hildesheim / Vienna, whose research is dedicated to the “materiality” of surfaces built of materials of the Modern Movement, such as steel and glass.

In October 2005, before the conference, a team of photographers from the Institut für Baugestaltung, Baukonstruktion und Entwerfen 2 visited the

⁵⁶ Sergio, Pace; Rosso, Michela and Chiorino, Cristiana, “Italia 61: The Nation on Show”, Umberto Allemande, Torino, 2006

⁵⁷ Cristiana, Chiorino, “Structural concrete architectural heritage, problems and strategies for documentation and conservation. The case study of Turin”, in Proceedings of the 2nd International fib Congress, Napoli, 2006

⁵⁸ Enrico, Giacomelli and Patrizia, Bonifazio (eds.), “Il territorio futuro. Letture e norme per il patrimonio dell’architettura moderna di Ivrea”, Umberto Allemandi & C. Editore, Torino, 2007

⁵⁹ Patrizia, Bonifazio and Enrico, Giacomelli, “Olivetti/Ivrea. Cultura di fabbrica e cultura architettonica”, Editore Mondadori – Electa, 2010.

⁶⁰ Patrizia, Bonifazio and Enrico, Giacomelli, “Ivrea, passato e futuro di una company town” special issue in *Parametro* 262 Anno XXXVI Marzo/Aprile 2006

Villa Tugendhat, and an exhibition accompanied the conference. Later, a photo documentation of the Villa was published⁶¹. Three years later, in June 2008, a further DOCOMOMO conference and a chapter members meeting were organised exactly at the Villa Tugendhat (minutes are available online http://www.docomomo.de/attachments/074_01_BRNO%20Protokoll.pdf), accompanied by the Declaration of Brno.

5.5 France

The fourth conference took place in January 2007 and focused on the French architecture. It was organised in cooperation with the Centre Culturel Français at Karlsruhe, Germany.

The overview talk was given by Christiane Schmuckle-Mollard, Chief-Architect at Historic Monuments, Paris. After a discussion about Le Corbusier buildings listed as UNESCO World Heritage by Michel Richard from the Le Corbusier Foundation in Paris, case study presentations followed. The Maison La Roche, where the foundation Le Corbusier is situated, was renovated afterwards, in 2009, as we had the occasion to learn during our visit. More case studies were presented after the lunch break, such as La Maison de Verre, Paris (1932, architect Pierre Chareau), by Bertrand Bauchet. Pierre Chareau was an architect whose interiors are characterized by flexible partitions between the rooms - sliding walls and similar. Maison de Verre (The Glass House) is called this way due to its facade made entirely of glass tiles⁶²; La Villa Cavroix in Croix (1932, architect Robert Mallet-Stevens), by Prof. Richard Klein, Lille; La Villa E-1027 in Roquebrune (1929, architects Eileen Gray /Jean Badovici), by Prof. Rainer Franke, Karlsruhe; Cité de La Muette – a vertical garden city (1934, architect Marcel Lods), by Prof. Pieter Uyttenhove from Ghent, Belgium; Le Havre and Auguste Perret, by Prof. Joseph Abram, Nancy / Paris.

There were also talks on Germany, such as the introductory one by Rüdiger Kramm on the approach of the Modern Movement architecture today, detailing the diminishing acceptance for buildings of the 1960s and the return to traditional housing such as Fachwerk.

The conference was accompanied by an exhibition about the city of ROYAN, a “ville nouvelle” of the reconstruction 1947-1959, photographs

⁶¹ Alex, Dill; Rüdiger, Kramm and Iveta, Cerna with the photographers Christoph, Engel; Thilo, Mechau and Bernd, Seeland, “Vila Tugendhat Brno”, Wasmuth, 2008

⁶² Pierre, Chareau and Brian B., Taylor, “Pierre Chareau. Designer and Architect”, Taschen Verlag, 1998

by Dirk Altenkirch, Karlsruhe, a city built entirely after the Second World War. This was the only conference after which a publication was issued, containing papers of the presentations in the original language, respectively German, English or French⁶³. In the meeting of the German chapter of DOCOMOMO a “Declaration of Karlsruhe” was released and can be consulted online
(http://www.docomomo.de/attachments/113_KarlsruherErklaerung_20070127.pdf).

5.6 Sweden (and Scandinavia)

The fifth conference took place on the 25th of January 2008, and it was focused on Sweden. This was also advertised in BauNetz (http://www.baunetz.de/meldungen/Meldungen_Ausstellung_und_Fachtagung_in_Karlsruhe_29466.html).

The introductory speech about the situation in Scandinavia was given by Ola Wedebrunn, co-chair of the DOCOMOMO International Technology working group from Copenhagen. A second introductory talk was about the 20th century heritage in Sweden. These were followed by case studies such as the Upper School for Girls, by Torbjörn Almqvist, from Stockholm, the Civic Hall from Eslöv, by Mats Edström, who also wrote a book on this subject⁶⁴, Siedlung Vällingby, by Sven Lorentzi from Stockholm, and the town hall in Göteborg, by Claes Caldenby, among other not so extensively presented case studies.

The accompanying exhibition was entitled “Bellevue - MOMONECO” focusing on the Bellevue, a seaside resort in Denmark, and documented in the frame of the European project MOMONECO “MODern MOVement NEighbourhood Cooperation, modernist dreams - 4 case studies” (<http://momoneco.kotka.fi/>) funded through the CULTURA 2000 European scheme. In the project there were 4 sites involved: Sunila in Finland, Bellevue-Bellavista in Denmark, Bat'ovany-Partizánske in Slovakia and Ivrea in Italy. Except for Bellevue, the other three were industrial sites. The Bellevue resort was designed by the architect Arne Jacobsen in the 1930s.

⁶³ Rüdiger, Kramm (ed.), „Zum aktuellen Umgang mit den Bauten der Moderne : Frankreich“, Universität Karlsruhe, Fakultät für Architektur, Institut für Baugestaltung, Baukonstruktion und Entwerfen, Karlsruhe, 2007

⁶⁴ Mats, Edström, „Medborgarhuset i Eslöv - Eslöv Civic Hall“, Arkitektur Förlag, 2007

5.7 Great Britain

The sixth conference took place in January 2009 and it focused on Great Britain (figure 1). (http://www.dbz.de/artikel/dbz_Das_architektonische_Erbe_6_Karlsruher_Tagung_Zum_aktuellen_Umgang_mit_70149.html) Immediately after the introduction, the president of DOCOMOMO Great Britain and the editor of the extracts from DOCOMOMO registries⁶⁵, Dennis Sharp, spoke about the Modern Movement in Great Britain. Overviews were presented by Keyvan Lankarani, from Avanti Architects, London, Igea Troiani from the University of Oxford and Alan Powers from the University of Greenwich. These alternated with presentations of case study as follows: the architecture of Ernő Goldfinger, an Hungarian immigrant less known outside Great Britain and whose centenary took place recently, by James Dunnet, from JD Architects, London; the restoration project of the De La Warr Pavilion (arch. Erich Mendelsohn and Serge Chermayeff), by John McAslan from JMA Architects, London, a project which was also the subject of a book⁶⁶; and the Flat Roof House, 1934 (arch. C. Lucas), by Yasmin Shariff from DS Architects, Hertford.

The last case study presented was about the Zeche Zollverein Coal Mine Industrial Complex in Germany, listed as UNESCO World Heritage and an example to be followed in the conversion of industrial architecture through the IBA Emscher Park project in Ruhr (European Capital of Culture in 2010).

From the many presentations, one of the most interesting was a peripheral Modern small scale building that was a victim of speculation and was demolished in order to use the property for a higher building, which unfortunately could not be avoided. However, the property was classified as “green belt”, of obviously lower value than the Modernist building. We could learn lessons from this for other countries, such as Romania where recently, at the end of 2009, a low-rise building by interwar architect Henrietta Delavrancea Gibory was demolished for similar reasons.

Another interesting talk was the presentation of the Twentieth Century Society (C20 Society), which seems to take over in Great Britain many of the attributes of DOCOMOMO.

⁶⁵ Dennis, Sharp and Catherine, Cooke, “The Modern Movement in Architecture – Lessons from the DOCOMOMO registers”, 010 Publishers, Rotterdam, 2000

⁶⁶ Alistair, Fairley, “De La Warr Pavilion: The Modernist Masterpiece”, Merrell Publishers Ltd, 2006

The conference was followed by the vernissage of two exhibitions, one in the well established tradition regarding the architectural potential of modern architecture by DOCOMOMO Great Britain called “British Case Studies” (Fig. 25) and the other regarding the prize of the Wüstenrot Stiftung foundation from Germany concerning projects in context (Fig. 24).

5.8 Russia (and Germany)

The seventh and last conference took place in January 2010 and, like the first one from the series, was focused on Russia and Germany. The overview talk was given by Natalia Dushkina about the Modern Movement Heritage in Russia. The presented case studies from Russia were the Students Commune House (Arch. Nicolaev), project and realization, by Vsevolod Kulish, Moscow, and the Haus Narkomfin (Arch. Ginzburg), a project by Alexey Ginzburg, Moscow.

Among switching between countries there was an interesting overview on the situation in Ukraine by Alexander Bouryak, from Kharkiv (Ukraine).

The case studies presented from Germany were: the Umspannwerk Berlin-Scharnhorst, by Paul Kahlfeld, Berlin; the ADBG Schule Bernau (Arch. H. Meyer), by Franz Jaschke, Berlin; and the Fagus Werk (Arch. W. Gropius and A. Meyer), by Ulrich Pagels, from Hannover.

The results of student studies were also presented, such as the Avant-Garde Heritage workshop in St. Petersburg by Diana Zitzmann, and Alex Dill, as well as the report from the excursion Magnitogorsk - Ernst Mays buildings today by Thomas Flierl, Berlin.

The exhibition was called “Avant-Garde - Defamation – World Cultural Heritage” and showed a contrast between the approaches in the East and the West, Russia and Germany.

5.9 Conclusions

In 2011, instead of the eighth conference from the series, the organizers are planning, together with the annual meeting of the DOCOMOMO chapter in Germany, a conference on architecture theory entitled “Authenticity” to take place on the 28th of January 2011 (<http://at.ekut.kit.edu/192.php>), in the same tradition as the previous meetings. However, this conference will not be accompanied by an exhibition, which is a loss that adds to the lack of related field trips.

The conferences we participated in were extremely instructive, covering a wide range of countries and presenting detailed case studies. The exhibitions provided a welcomed enrichment of these meetings and were also use-

ful for networking. We somehow feel sorry that there were not more books published to document these conferences and that the only one documenting the presentations is not available online. The speakers were great names in heritage conservation and many of them are published authors with books on the restoration projects they presented at the conference, although sometimes the objects were the subject of books by other authors. Literature on conservation of the Modern Movement buildings (Fig. 26) is generally rare once approaches are also new. Some time ago these buildings were still considered not old enough to be part of the heritage. This was also the reason of the creation of DOCOMOMO, but still the documentation of the history of architecture is better represented than conservation issues in the work of the association in our opinion. Of course the conference could not cover all relevant buildings even of the covered countries and obviously cannot replace the study trips to see the restored buildings. Perhaps the future conferences could be held at various locations in order to allow in situ visits.



Fig. 31. Exhibition at the conference. Photo: M. Bostenaru, 2010.



Fig. 32. Conference in 2010. Photo: M. Bostenaru, 2010.



Fig. 33. Literature to Modernism restoration. Photo: M. Bostenaru, 2010.

6. Technology in the Architecture of Modernism

The architectural heritage

10th anniversary conference in Karlsruhe on architecture – theory and practice / Alex Dill (conference), Maria Bostenaru (review)⁶⁷

6.1. Introduction

The years 2004-2010 marked a series of seven conferences on the topic The architectural heritage – about the contemporary approach to the buildings of Modernity, about which we wrote a review in the journal. In 2011, additionally to their aim on practicing architects, theory elements were introduced. 2013 marks the 10th anniversary of conferences organized by Alex Dill, dealing with the architectural heritage, and was at the same time DOCOMOMO (international committee for DOcumentation and CONservation of buildings, sites and neighbourhoods of the MODern MOVement) technology seminar. Unlike the former exhibitions accompanying the conference, this year there were accompanying excursions to conservation and intervention works on sites of the Modern Movement in Germany.

On 25-26 January 2013 the anniversary conference of those dealing with “The architectural heritage”, actually the architectural heritage of the Modern Movement, took place at the Karlsruhe Institute of Technology, in Germany, being at the same time DOCOMOMO (international committee for DOcumentation and CONservation of buildings, sites and neighbourhoods of the MODern MOVement) International technology seminar (International Scientific Committee Technology). The conference series are supported by Beton Marketing Süd and as such a number of the lectures enhanced the role of reinforced concrete as material of Modernity. The conferences were also recognised as continued learning events for architects by the architecture chamber, but also open to the general public. As such, after a day of presentations, a day of site visits to EZB Frankfurt or to Dammerstock Karlsruhe followed. Organiser was architect Alex Dill, academic councilor,

⁶⁷ This paper has been first published, under Creative Commons licence, in the e-conservation magazine <http://www.e-conservationline.com/content/view/1097>

together with colleagues from DOCOMOMO Germany Uta Pottgiesser and Jos Tomlow. Through generous support of the Getty Research Institute, it was also possible to involve the related ICOMOS (International Committee on Monuments and Sites) related International Scientific Committee ISC20C. Both committees held meetings related to the conference.

6.2 Conference

Different from the first 7 conferences we wrote about, this conference dealt with the influence of material on what is called in German “Baukonstruktion”, the constructive scaffold of a building including its details, this conference featured both contributions of today’s intervention on historic buildings and their materials, as well as studies on the history itself and on employment of materials in the past.

The first lecture introduced the Großmarkthalle Frankfurt, today transformed in the Europäische Zentralbank, which was also one of the sites to be visited in the second conference day. Under the motto “syntheses” Horst Pesecke presented the view of an engineering company, and talked on the history of reinforced concrete, from the view of codes, journals, and other ways of interaction between research and practice, and put the developments of concrete for shell structures at the Großmarkthalle in the context of the contemporary Jahrhunderthalle in Wrocklaw and of a new building in Lausanne. As the closing discussion showed, the most important point was the role of the actors from different disciplines in the design process.

The second lecture focused instead on “innovations”. Wolfgang Thöner, an expert in the history of the Bauhaus Dessau talked about the influence of industry on the experimental teaching at that site.

Jan Molema was the next speaker, coming from the Netherlands. In his lecture under the topic “limits” he returned to the role of concrete, presenting the Zonnenstraat sanatorium restoration, but he also went to detailing in other materials, such as the transformation in Maison de Verre. The reason for this is his current ongoing research on Bernhard Bijvoet, Johannes Duijker and Jan Gerko Wiebenga, the names of these actors binding the two buildings.

We returned to the start of the conference series with the next one, on “Transfer”. Anke Zalivako from Berlin talked about Russian Avantgarde and the relationship of Constructivismus to technology. Although her detailed studies served the Narkomfin building, the research presented was much more wide and included the relationship between building material,

“Baukonstruktion” and preservation in the Russian constructivist buildings in Moscow between 1919 and 1934.

It can be said that the retrospective on former editions of the conference continued, with a contribution from another country to which formerly a whole conference was dedicated: after the Netherlands and Russia: France. Vanessa Fernandez, doctoral candidate, and Emmanuelle Gallo presented the relationship between façade technology and interior comfort in case of Le Corbusier’s building for the Salvation Army. While a full glazing to the side of the house turned towards the sun lead in winter to costs savings in heating, in summer, for preventing the negative effects, brise-soleil had to be attached. The intervention to improve the quality of the building was not situated at such a long time span from the erection as in the other cases.

The next three lectures were dedicated to architecture from overseas, a new element in the series of conferences. A presentation on earthquake resistant architecture from Japan had to be replaced.

Under the motto “Nonchalance” Danilo Matoso Macedo presented the contribution of the engineer, in this case Joachim Cardoso to Oscar Niemeyer’s architecture. The lecture was therewith an homage to the recently deceased architect. Oscar Niemeyer worked with several engineers, including a graduate from Karlsruhe university, but the special contribution of Cardoso, this time to architecture in concrete, was on the shape of the elements. A rectangle becomes slightly ellipsoidal to mathematically optimize these shapes in the pillars designed by the architect. Parabols were defining the arcades. In the view of the speaker in this case the dialogue between the actors lead to teamwork.

The chair of ICOMOS ISC20C presented the Los Angeles “case study house” programme, an example of “Standardisation”: 25 houses built starting 1948 till the 1960s, an example of the power of a journal such as *Arts&Architecture*. Kyle Normandin, now project manager at the Getty Research Institute, went into detail for the houses designed by Neutra, Eames and Koenig, from timber to steel prefabrication. Photographs of these buildings by a photographer as renowned as Julius Shulman help the perception of the buildings by the public. Protection of Modernist heritage is differently seen in the USA and in this case the houses can be better preserved thanks to collaborative partnership with Escher GuneWardena Architecture, the company of the next speaker.

Frank Escher’s talk dedicated on “Futuristic living” was however not related to this work, but presenting the ideosyncratic architecture of John Lautner, the archive of which he served as administrator until 2007, when the archive moved to Getty. Now he serves on the Board of Directors of the

Lautner foundation. John Lautner is best known for his works in concrete, with which he however started only conjuncturally in the 1960s, working before in timber.

Returning to the retrospective, Iveta Cerna talked on “Visions” becoming reality in case of Villa Tugendhat in Brno. There is a close connection between these conference series and the villa, DOCOMOMO Germany holding some of its meetings at that location and a number of its members being also in the THICOM – International Commission of Experts for the Tugendhat House. When the villa was first presented, and the photo album done in frame of the research performed with the conference series (by the photographer of the Karlsruhe Institute of Technology) the restoration has not taken place yet. There has been an old first one in the 1980s, but the second was done 2010-2012 with EU funds and the villa just opened to the public. Iveta Cerna, director of the Museum Villa Tugendhat, presented the history of the villa: building, decay and today’s new glance.

A lecture which explicitly mentioned digital technology was that by Colin Davies on Foster and Rogers and the start of British high-tech. Now high tech means digital technology, but the high tech in architecture was predigital. Prefabricated detailing in miesian tradition was shown, and the beauty of the exposed structure.

The closing lecture was given by Christina Kanstiger-Otto, the daughter and partner of Frei Otto. In a chronological overview of his most important works, including the Multihalle at the Bundesgartenschau in Mannheim, the wandering of the university institute in Stuttgart, and the work in Montreal, she showed how the free forms were developed from model to reality, and the importance of yet another material: the textile.

The closing discussion concentrated on two points:

- the already mentioned importance of actors today, which did not exist in the Middle Ages, when architect, engineer and even investor were one and the same – with the question how the development of technology is influenced by the cooperation between the actors
- the new question if “function follows form”

Returning to the topic of the conference series, it was concluded that preservation also needs inventive people in relation to technology. And because of this innovation regular inspection is needed. Preservation depends on how people are looking to these buildings, not only iconic buildings.

In the second day we participated to the excursion in Dammerstock. The Dammerstock Siedlung was built following a competition won by Walter Gropius in 1929 under the name exhibition “Die Gebrauchswohnung” (the usage house). The second prize was of Otto Haessler, who designed both a

multistory and a single storey rowhouse. The Dammerstock Siedlung is characterized by these rows, called “Zeile” in German.

We had the occasion to discuss the urban planning models from the competition, included in an info pavilion, and to see from inside and outside two reference apartments for which preservation in order to be more energy efficiently (especially relating water usage) is proposed. The first one, the building of Otto Haessler, just at the entrance in the Siedlung, is connected to a washing room, on which we could see the damage caused by the lack of isolation of the structural parts in metal. Otto Haessler proposed for this building a metal skeleton like at the buildings in Celle, about which we wrote in the World Housing Encyclopedia (link). The intervention proposed among others to assure the way how the staircase connects to the main building replacing the rollos through glazing. The second one was a building by Walter Gropius next to a copy of it from the 1950s. Later interventions on the Siedlung also filled the gap between them with a connection building now used as exhibition place. The office of the architecture office doing the works, Mazke, is situated in the ground floor of the Gropius building and served as an example of the state of today, while a building on the last floor is currently building site. We could see for example the reference bathroom. In this building Gropius used entrances from external corridors, which along the doors are wider, providing for more living space.

6.3 Conclusions

According to the organizers the conference “dealt with the question on how technology was perceived by designing architects and how those were collaborating with engineers and found adequate building material and systems as a part of the design process”. Although numerous presentations dealt with concrete, we saw also the relationship to timber, to which we dedicated some research (link book review). The development of the language started so, according to Henri van de Velde and Istvan Medgyaszay. Attendance to the conference was made possible in frame of a short visit grant from the Network of Digital Methods in Arts and Humanities on the topic “Architectural heritage protection of the central area of Bucharest – mapping ways of visualisation in GIS and archives”, aim of which was to make visible to the general public the early reinforced concrete heritage in Bucharest, topic of our doctorate. Maybe in future editions of the conference also the heritage in Romania will be dealt with, given this opportunity to make it known. Although the aim of the network is to make available research materials through digital means for remote consulting, the site visits

after the conference showed again the importance of perceiving in real 3D a building, and the meetings at the conference the importance of networking through personal contacts. A digital infrastructure shall be the starting point for that important part in the education of an architect which is the study trip.

As we have seen the conference provided selected examples from countries editions previous to the anniversary dealt with: the Netherlands, Russia, France, Czech Republic, England, and of course Germany.



Fig. 34. Dammerstock siedlung rehabilitation. Photo: M. Bostenaru, 2013.

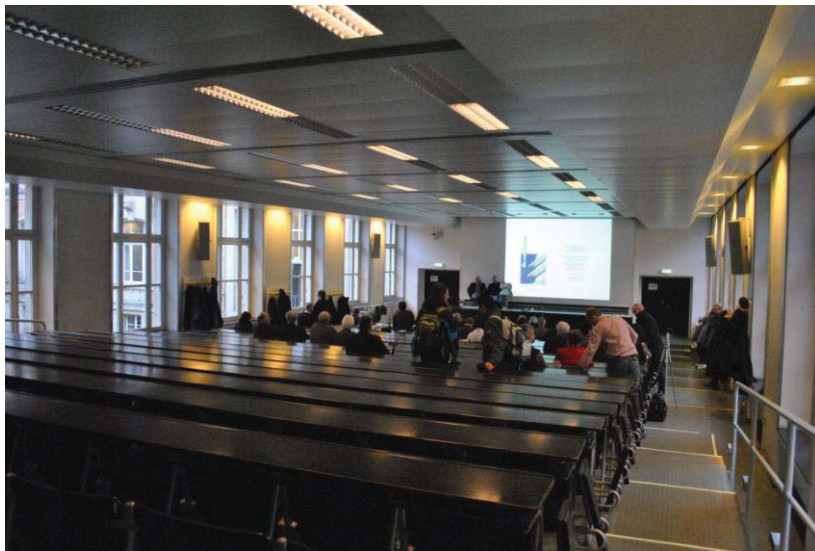


Fig. 35. Conference in 2013. Photo: M. Bostenaru, 2013.

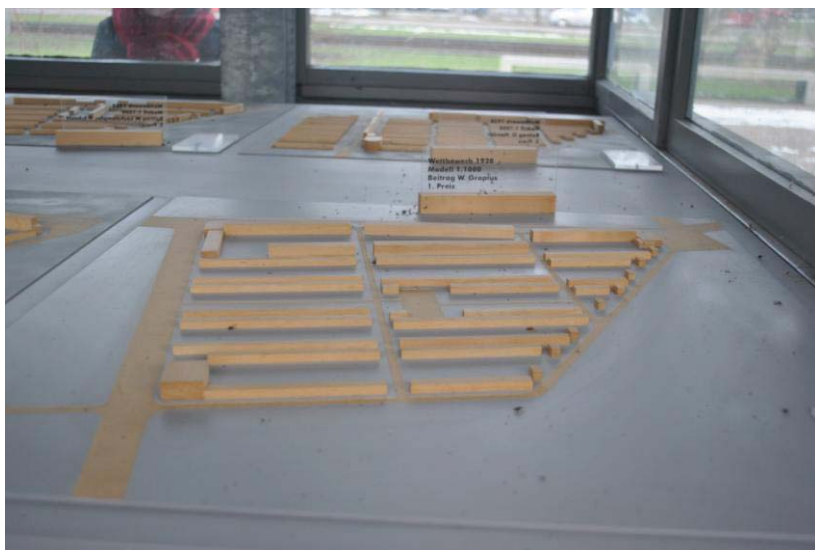


Fig. 36. Dammerstock siedlung model. Photo: M. Bostenaru, 2013.



Fig. 37. Dammerstock Siedlung excursion, Photo: M. Bostenaru, 2013.



Fig. 38. Damerstock Siedlung excursion. Photo: M. Bostenaru, 2013.

7. About use trails and patina – at the end of the conference „Original and replacement“ / Alex Dill

Each restoration is usually an individual case. Simplified the author could name a restoration as being successful, when the construction work remains conserved and maintained, on the background of a documented construction history, in the sense of its architectural character, taking into account its social claim, its functions, its technology, its materiality and its aesthetics, its basic architectural quality in the whole and in detail as authentically as possible. When a construction work is restored corresponding to internationally recognised standards, goals and requirements from for example UNESCO and organisations such as ICOMOS or docomomo knowledgeable for specialists and successfully, it can be valued as an example. There is no formula for the guaranteed success. According to the author's experience, a thoroughly construction research and professional documentation are the key for success. A restoration concept which suits the architecture and project concept of the original is the further condition, and an extremely engaged cooperation of all experts and responsible is finally necessary for the success. The successful result is then in any case competitionless and of exceptional and sustainable value.

The newest example of this kind is the Villa Tugendhat in Brno, which was reopened on the 29th of February 2012. The network docomomo conducts a registry with buildings and descriptions of selected buildings of Modernism, and in the latter years there is outstanding literature to the newest examples, like the publication row of the Wüstenrot foundation, which served much in the field of restoration of Modernist architecture. Some exemplary, very impressive and exceptionally interesting examples are the neighbourhoods in Berlin in the 1920s, in the meantime world heritage, the ADGB-school in Bernau, which got the Knoll – Award/World Monument Fund, the House Schminke in Löbau, the Einstein tower in Berlin, the Work office in Dessau and the Henry and Emma Budge dormitory in Frankfurt. Abroad are exceptional, successful restoration for example the library in Vipuri (today Russia) by Alvar Aalto, Maison de Verre in Paris by Pierre Chareau, Sanatorium Zonnestraal at Hilversum by Johannes Duiker, and the Lever Haus in New York, designed by Gordon Bunshaft.

For a desirable approach to the buildings of Modernism, especially of the postwar Modernism would be good if the communes, but also the independ-

ent architects and engineers would recognise the potential as architectural heritage and take it seriously, then together with an illuminated public and with the public and private owners would take care of the professional maintenance. In this place there is a lack through the diminution of the monument maintenance offices for the cultivated approach. The objects are on one side not "old" enough in order to be considered historically valuable, and at the same time they serve modified tasks and in case of necessity are not restored by specialists or are immediately victims of a complete new planning and of the higher, speculative exploitation. The investment pressure on the immeubles in agglomeration spaces is enormously high.

These construction monuments differ from those from other times because here it is about industrial construction and new materials and the in the meantime created distance to the current, valid conditions of a building, for example considering the comfort and sustainability. Still the already existing international standards contain guidelines, the existing charter also for these buildings in a fully sufficient way. They must be only employed.

A building does not lose value through aging, but through false maintenance. Patina is here a very positive keyword, and to this belong also the traces of use. The basis for the approach is an architectural knowledge, the findings from construction research and the maintenance or restoration concept. Correspondingly "time windows" remain, the traces of use or the versions from construction time or later ones can be displayed and maintained with sense.

During restoration or change principally all mistakes, which can happen, can happen, for example when employed are original surfaces or architectural elements like facades, staircases, interiors etc. are removed for lack of interest of through replacement of a for example mirrored flat glassing, unsuitable plaster layers, unsuitable energy improvements. Basically it is valid, a fully new function must fit the architecture and not the other way around. It would be false to work against the architectural substance and the character of a building.

The title World Heritage means for a building the guarantee for good success and best conditions, but can also be retracted in case of false behaviour. Connected to it is a contract for retaining, using and maintaining corresponding to the named international standards and goals. A monitoring through experts is compulsory from time to time. World heritage sites have become partially also a tourist attraction, and exactly this is again a serious danger for the buildings or artworks. Many objects, for example private houses and assemblies are not really suitable for mass tourism, but accessible understandably only after registration, in guided groups or with corre-

sponding limitations – for example Maison de Verre in Paris, the house Sonnefeld in Rotterdam, the Villa Tugendhat in Brno and the Villa Müller in Prague.

Different cultures take a different reference to architecture, its value and its stock. The occidental culture sets since the Renaissance at the latest highly on the value of the original, on the respect of the individuality and on historical conscience. In the orient different cultural values are developed, and in Asia or Africa for example time, duration and temporality are seen and experienced in a different way and with different cultural routes. From here comes that for example in the byzantine culture an icon does not lose value if overpainted. In these cultural difference does the author see also a reason for the ignorance of the responsible in Russia for the not existing monument maintenance of buildings of the Avant-Garde and of Constructivism (for example the housing building by Melnicov) in Russia. Not a single one of these buildings is prepared for a UNESCO list and maintained so, the world is quasi left poorer a piece of common mankind heritage.

The idea, a complete replacement, so an actual copy could be even more advantageous and replace on a much more convincing art built heritage is sadly widely spread. But this sounds sadder as it is. In reality we have never had such a big interest to retain building. Today there is an extremely high attention for monument maintenance, a fast exchange and big precision in application.

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Fig. 39. Villa Tugendhat, Brno, architect Ludwig Mies van der Rohe (1929-1930), before restoration. Photo: Alex Dill.



Fig. 40. Villa Tugendhat, Brno, architect Ludwig Mies van der Rohe (1929-1930), during restoration. Photo: Alex Dill.



Fig. 41. Villa Tugendhat, Brno, architect Ludwig Mies van der Rohe (1929-1930), during restoration. Photo: Alex Dill.



Fig. 42. Villa Tugendhat, Brno, architect Ludwig Mies van der Rohe (1929-1930), during restoration. Photo: Alex Dill.



Fig. 43. Villa Tugendhat, Brno, architect Ludwig Mies van der Rohe (1929-1930), during restoration. Photo: Alex Dill.

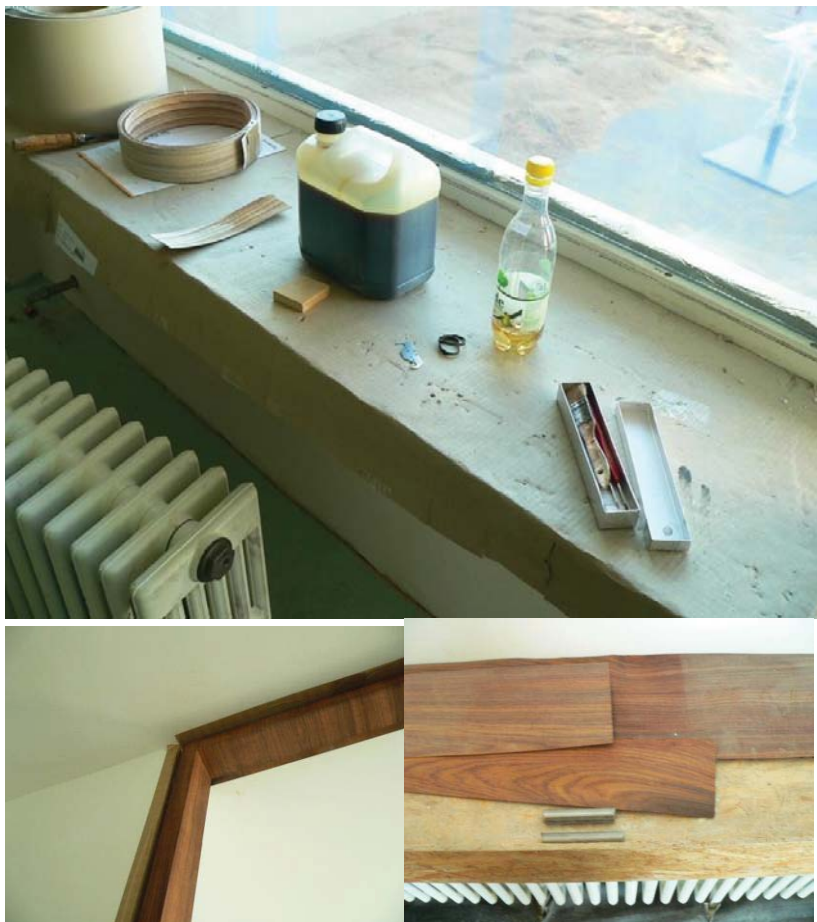


Fig. 44. Villa Tugendhat, Brno, architect Ludwig Mies van der Rohe (1929-1930), during restoration. Photo: Alex Dill.

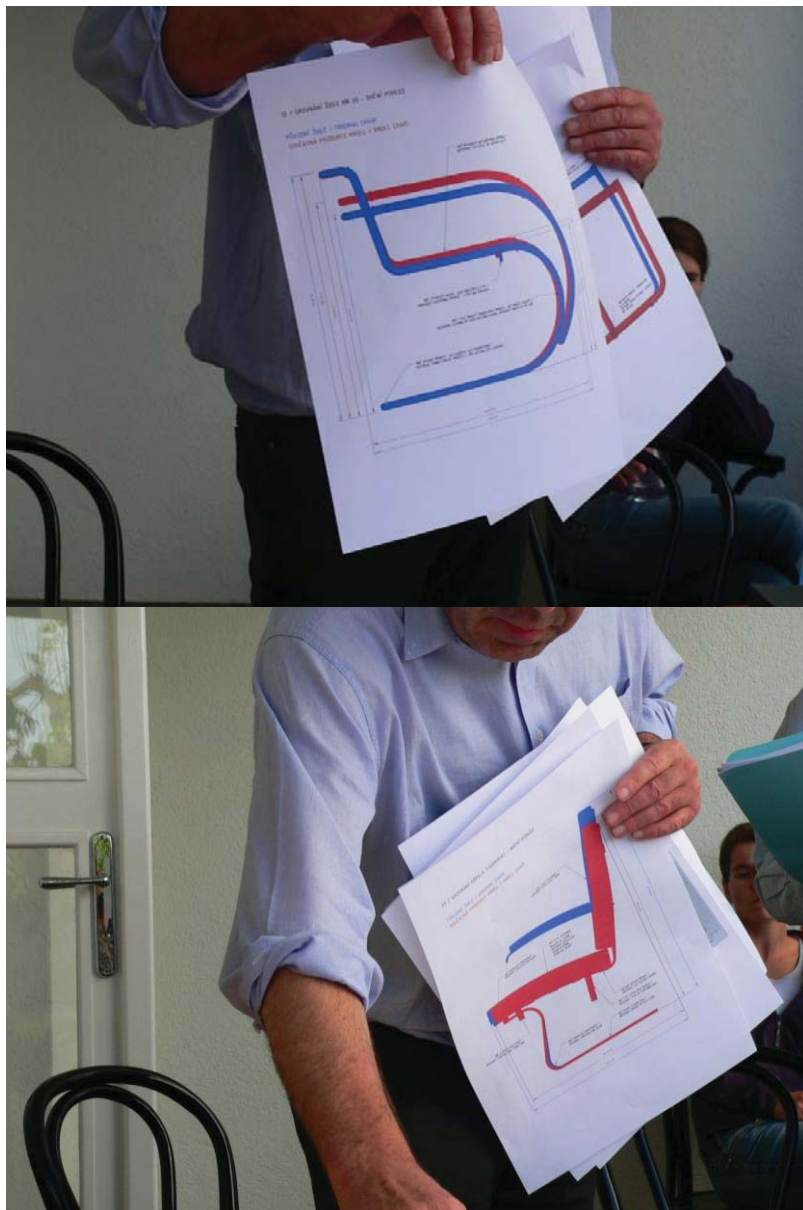


Fig. 45. Villa Tugendhat, Brno, architect Ludwig Mies van der Rohe (1929-1930), during restoration. Photo: Alex Dill.



Fig. 46. Villa Tugendhat, Brno, architect Ludwig Mies van der Rohe (1929-1930), during restoration. Photo: Alex Dill.



Fig. 47. Villa Tugendhat, Brno, architect Ludwig Mies van der Rohe (1929-1930), during restoration. Photo: Alex Dill.



Fig. 48. Villa Tugendhat, Brno, architect Ludwig Mies van der Rohe (1929-1930), after restoration, exterior. Photo: Alex Dill.



Fig. 49. Villa Tugendhat, Brno, architect Ludwig Mies van der Rohe (1929-1930), after restoration, interiors. Photo: Alex Dill.



Fig. 50. Big Market Hall, Frankfurt. Photo: Alex Dill, 2004.



Fig. 51. Big Market Hall, Frankfurt. Photo: Alex Dill.

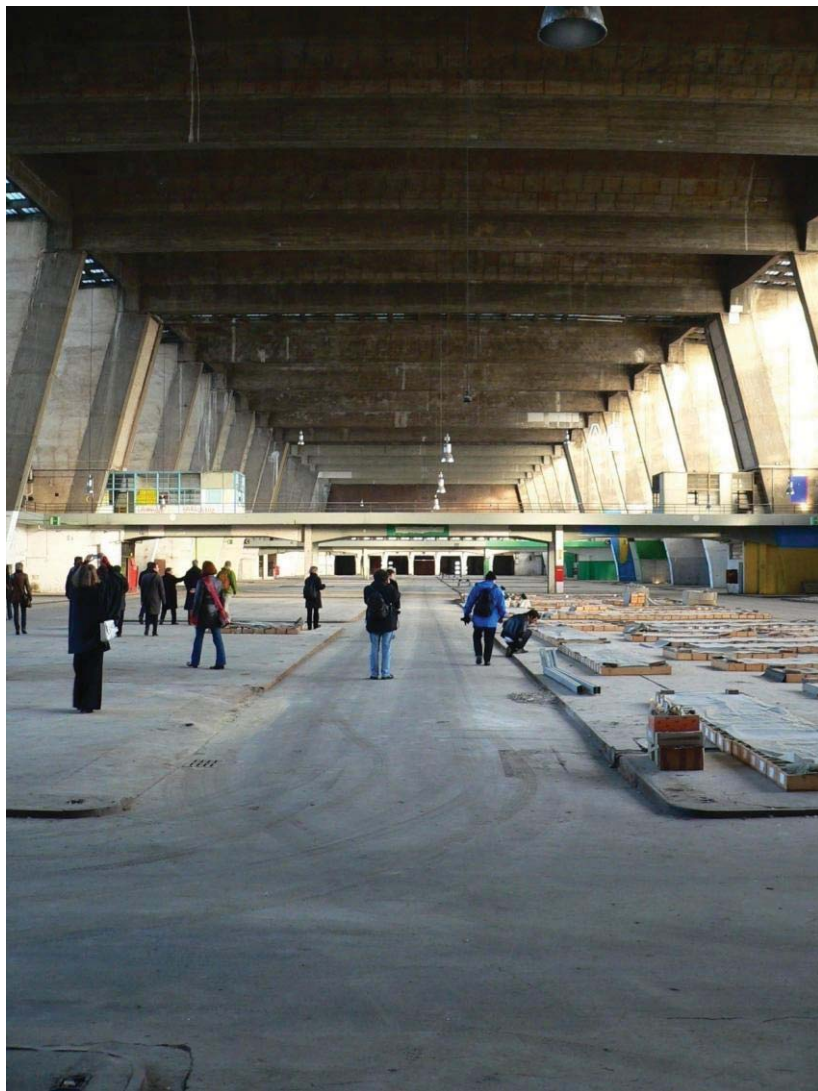


Fig. 52. Big Market Hall, Frankfurt. Photo: Alex Dill.



Fig. 53. Big Market Hall, Frankfurt. Photo: Alex Dill.



Fig. 54. Big Market Hall, Frankfurt. Photo: Alex Dill.

8. ORIGINAL + REPLACEMENT / Alex Dill

Virtuality is Reality

Modernity:

Walter Gropius and the Bauhaus Dessau together with the modern movement proclaimed the industrial production of architecture, interiors, furniture and all kinds of things needed in the modern life. Technologie as art was the key to industrial production, in traffic (Junkers Vision of an civil airtraffic), in fields of common and social life together with the vision of a healthy, peaceful, democratic Society under the horizon of an INTERNATIONALISM. So far the two systems of capitalism and socialism, as a consequence of shared knowledge and interest of artists, engineers and scientists in East and West have been in the same competition.

We still are all living and enjoying the fruits of this modernity, trying to avoid the disadvantages and the hybris of exploitation and uncontrollable technological risks, the other side of the medal by fighting for the development of the

“project of civilization”.

Virtuallity:

The Information Science and Technologie now reached a practice in research, production and culture that we can say theirs is a new aera of Reality. It is Virtuality, globalization and a rapid change in the organization and development of the societies, very new possibilities of researching and using material, extreme demands to ecological production and care or fight for resources trying to set up peace and health in so many countries of the world suffering strongly by extreme living conditions.

The young generation is coming up using second life and computer games, virtual reality and international simmultanous communication as a new cultural chance,

“virtuallity”.

Originality + Replacement depend on culture:

Nomad cultures have a very different practice of life than city cultures. For example soil, nature richness and water rights are free again after the inhabitants have moved and it is not possible to take it and devide it into private ownership. The Tradition of the Occident is different from the Orient. There are different ways of thinking about AUTHENTICITY. In European culture we are thinking of our existing and our surrounding as a

UNIQUE THING. For example since the renaissance a picture or a sculpture of Michelangelo Buonarotti is worthful as the Original, a Rembrand painting is of high value only if it is authentic and it is very clear that the buildings of the modern movement for example of Le Corbusier or Gerrit Rietfeld today are of big cultural and economic value similar to the art peaces of the Modern Art. The work of Oskar Niemeyer, Brasilia was announced World Heritage in 19.. and the Vila Tugendhat of Ludwig, Mies van der Rohe, became World Heritage Status 2008 together with the challenge to a sophisticated research, documentation and conservation to present its original Materials, the Spirit of the space and the historical Authenticity together with the adventiorous History of the house and its users.

The Byzantine Culture allows that the painting of an "IKON" could be covered again without losing its value, it is a religious and so far a spiritual value that risis by the use and the richness of adorations, that means that for the conscious in practice it can have the consequence that Originality in architecture is treated in another way, strictly conservation is not necessary, changes can be welcome, like we can see in many projects in Russia, like the planetarium in Moscow, famous workers-clubs, housing and many other important monuments of the avant-garde.

In Japan and Areas in Tibet we have the Ritual renewal of some very important temples, they are burned down and replaced, demonstrating re-birthing and continuity. This is another conscious of the replacement, the COPY.

Taking all aspects of globalization, new technologies, migration and changes of generation into account it means that the challenge is high developed culture + consciousness

advanced EDUCATION, RESEARCH, COMMUNICATION,
CULTURE + POLITIC

"original heritage"

Fazit:

We are creating new Design, New Architecture, New Cities.

We take part creating a New Culture for tomorrow.

We are building the Architectural Heritage of tomorrow.

Virtuallity as Reality has become the fashion of today. Diversification is the luxury and the punishment of a culture in times of globalization and enormous richness and poorness at the same time.

Original Architectural Heritage is an outstanding cultural value. It is a treasure for every future and we all are the family of hires, that have the privilege to share and the challenge to care for this VALUE.



1983-86



1928-29

Fig. 55. Replacement: Expo Pavillion Barcelona, architect Ludwig Mies van der Rohe (top – see also the study trip) and original: Villa Tugendhat, Brno, architect Ludwig Mies van der Rohe (bottom). Photo: Alex Dill.



Fig. 56. Big Market Hall, Frankfurt, 1929. Photo: Alex Dill, 2002.



Fig. 57. instead of protection / two different fire attacks Photo: Alex Dill.

9. Modernism in Europe

„About the role of Werkbund neighbourhoods in European context“ - Werkbund neighbourhoods in contemporary Europe / Alex Dill

9.1 The Werkbund neighbourhoods in Europe

Are today in Poland, Czech Republic, Austria, Switzerland and Germany unique architecture monuments from my point of view and cultural heritage which deserves a common European recognition as cultural heritage in any case.

This is because of the character of the neighbourhoods as exhibitions of the Avant-Garde. They were this already early at the beginning of the 20th century. This was European spirit while the national states were still deep in their ego interests and developments. On the difficult way in a common Europe of democratic states they were successful as an inspiring example of international cooperation of progressive artists and architects. The experimental housing neighbourhoods, which were created at the initiative of different Werkbund groups were not only an important cultural and social engagement. In the shortest time new possibilities and findings were presented in public and discussed as timely limited exhibitions and as current future prototypes and model neighbourhoods. “The model neighbourhoods were, apart from specialist journals, the megaphone of a new building culture” (W.). They prove at the same time the high expectations of quality in architecture, in product design, in shaping the environment of housing in community. The Werkbund neighbourhoods articulate all discussions which stayed in the centre of the work of Werkbund. They are single testimonies of the creativity of the architects, initiators and builders, of their international cooperation and of social start.

This chapter will give detailed thoughts to the following keywords:

- 1 The Werkbund
- 2 Modernism as cultural heritage in Europe
- 3 Building culture in international comparison
- 4 The international exchange and the expertise

The author is himself member of the Werkbund, because this association of artists, architects, designers and creators of culture responds to current questions in a big openness and tries as a group of engaged specialists to edit

valuable contributions to the development and shaping of our environment. Although it was founded more than 100 years ago, the Werkbund remained actual for these reasons, also in contemporaneity which is more characterised by initiatives and networks or for examples NGOs.

Julius Posener talked very suitably about this:

„The titles may be others, which can be written about the activity of the Werkbund, the contents are basically the same. They were tensioned further than the narrow and dry concept of an industrial culture.

The topic of the Werkbund is, in the widest sense, culture critique. It has never been different” (in „Lexikon der Architektur des 20. Jhdts., 1983, Hatje Verlag)

9.2 The Werkbund,

founded 1907, is no association of interests. It has always been open for the most actual questions of its time, and non dogmatic. Its members didn't have to have a common opinion, they quarried and fought with each other, and it did not go for this reason a straight way in the run of the time. It was inspired by the Arts and Crafts movement, but the most important differentiation characteristic was that the Werkbund was together with industry and not against it towards responding to the difficulties of the coming society, the mass production, which may lead to feeling foreign. It has been understood that not against but with the quickly progressing industry solutions could be found. And the industrials have understood this as well, as in case of for example Walther Rathenau, the son of the founder of AEG, which gave over all development and conformation tasks about the world company to Peter Behrens, from writing, over the architecture till the smallest product. The workers had to be proud of their firma, of their factory and their products and had to be an important exporter on the basis of their superior quality and have success in the international competition. The Englishman Robert Ashbee has already formulated 1908 this way, quality in the product and in that one, who produces. (L.Burckhardt, Der Werkbund)

WWI ended the enthusiasm for the victory way of German industry. Tesenow remembers this in the book “Manual work and small town”. On the height of the blood in the last war year, senselessly extended and commanded by military people like Erich F. W. Ludendorf and the regents, he writes that the hell did not start first with the genocide. He means also the arming not known before. The power loss of the German industry is felt like a redemption.

1919 Poelzig talks about the fact that at the begin the Werkbund was brought to life by a spiritual and not an economic movement. It was a “Return to arts” (Adolf Behne) and it has been always about a rational position towards machine aesthetics and to industry design around “constructive culture critique”. – But the industry was not destroyed and the Werkbund was put opposite to new, mainly socio-economic challenges.

The Bauhaus was a step from the new direction for an industrial production, to the Bauhaus the workshops of a new lab for the editing of models for industrial production. Typisation was the key word. The architecture of new rationality was created, the “Neues Bauen” (new construction), the architecture of functionalism. „L’Esprit Nouveau“, finally the Modernism, which should make world wide furors as international style. How close was the architecture of Modernism to the Werkbund is shown by the fact that Le Corbusier, the Dutch Mart Stam and Pieter Oud participated at the Werkbund neighbourhoods. Le Corbusier, Mies van der Rohe and Gropius have already met in the planning office of Peter Behrens, the founding member of the Werkbund, in 1907.

With all differences and contradictory views a goal has been always common: the testimony to quality.

The Werkbund neighbourhood to Stuttgart Weißenhof was releaser of internationally important developments such as CIAM, already one year later.

The Werkbund oriented itself always towards new, upcoming topics, housing as social basic problem and task, to the processes of further development of a society of consumption and information, to the “endangering of life quality”, yes of the “basis of life”, the protection of environment in the conference and action under the somewhat old title 1959 “The huge land destruction”.

Today the name of Werkbund is still Werkbund. It has been years long engaged fighter and guaranty ... “for beauty, taste, shape, dignity and for the noble making of manual work, of the commodities and of the people who use it” (conference presentation Okt 1959) ?

He critiques the industry and the politics where it is where it is appropriate, and does not work anymore hand in hand with the production, which was decoupled since long, as well as the planning activity of cities and the community. New topics appear and the communes and communities take on with pleasure sometimes critical analysis and proposals, new ideas. Even if it is more silent in the Werkbund and to the same time louder and faster in the net of information and the spread of important and non important trends. The Qualities of everyday reality of the citizens, their life and work conditions and their environment remained constant question and challenge, and

the goal of a further development of the forms of democracy in a global society of new so far not yet known technologies and new economy forms.

Peter Behrens AEG , 1908, / German Werkbund exhibition Coeln 1914, Lilliy Reich + Ludwig Mies van der Rohe 1928 3. Exhibitions for the textile industry, Exhibition Marcel Breuer 1926, Apartment 1931,

Brussel, World Exhibition, German Pavillon 1958, Egon Eiermann + Sep Ruf,

Otl Aicher, Günther Behnisch; Olympiad Munich, „The merry games“

9.3 Modernism as (common) cultural heritage in Europe

has a very intensive tradition, in which artists, architects, musicians and practitioners and science inspired each other their work, influenced themselves, worked together, travelled, stayed in competition but before everything were invited to different places of cultural happening and got tasks.

In Modernism they was for example painter, grafician, architect and designer El Lissitzki (Lasar Markowitsch Lissizki) from Smolensk who studied at the TH Darmstadt (1909-14). After the Russian Revolution he took the new situation in Russia as departure and took as one of the young Avant-Garde artists the role of a cultural ambassador of the still young revolutionary Russia. He was sent to travel in whole Western Europe and was known in the European scene and intergrated therein, with some in close friendship and so he stayed in exchange with Theo an Doesburg and the De Stijl members and many artists in remaining Europe. Ginzburg studied in Milan and had been always best informed about Western news and findings. Le Corbusier visited his Narkomfin house and asked for detail drawings of the facade.

Eileen Gray, the designer born in Ireland, who is world known till today with the own showroom in Paris and an own, from Le Corbusier admired house and very Avant-Garde furniture, had let to be sent to her immediately after appearance the Futurismus manifesto from Italy, and was very interested in extravagant material employment. She studied Japanese lack art and was interested in all news regarding material employment up to light airplane construction. Surprisingly, she was one of the creative and independent women with worldwide perspective and connections in a field, which was that time fully dominated by men.

The Bauhaus of the Russian Avant-Garde schools for example Whute-mas, its architects and artists had frequent exchange. This way it came without saying also to common or parallel efforts, exhibitions, projects, which, without the one to one inspirations wouldn't have been so excep-

tional, pioneering and renowned – European destinies / European cultural performance.

This all talks for the commons of a European heritage of Modernism.

One can also say, that we are a heritage community, which has to preserve a common priceworthy heritage well and in common.

(How impulse giving for international exchange it has been shown already in the small example of the artists colony in the author's residence city Darmstadt. The Mathildenhöhe in Darmstadt, one of the three important Art Nouveau centres in Europe, was not initiated or done by the citizens of Darmstadt, but the release were impressions and influences from England around the young, modern prince raised in England and the creativity of artists around Joseph Maria Olbrich from Vienna (first exhibition 1901): Olbrich was in Vienna already a star when he was called to Darmstadt. He was afterwards also very successful also with buildings in Germany, ex. Department store in Düsseldorf, taking influence on the architecture development in Europe. Also the "Russian-orthodox church" in Darmstadt, planned and fabricated in St. Petersburg (inauguration in Darmstadt on the Mathildenhöhe, 1899) was designed by the court architect Louis Benois and transported to Darmstadt in huge boxes which were assembled there.)

9.4 Building culture in international comparison (European cultural heritage / world heritage)

The UNESCO has in the meantime now 981 world heritage sites in about 160 states. It is differentiated between cultural and natural monuments. The current number shows 759 cultural monuments and 193 natural monuments. An international comparison of buildings or assemblies which are certified today as UNESCO world heritage or for which it has been applied for show, that there are big differences in the application and in the recognition and listing.

In Russia and in some GUS states there is little certified cultural heritage, in states with active monument protection, in Western Europe in the meantime really many.

Exactly the Modernism is not represented at all in the East, which has purely political reasons.

Modernism in the West, with the Bauhaus sites Weimar and Dessau (1919-33) Rietveld-Schroeder-Huis (Utrecht,NL, 1924-25), Haus Tugendhat (Brno, Czech Republic, 1930), Zeche Zollverein (Essen, 1928-32), Reconstruction of Le Havre (1945-64), Century hall Breslau (1911-13),

Neighbourhoods of Modernism in Berlin (1913-1934) Fagus Works (Alfeld, 1911)

The unilaterality of the listing of works of the 20th century means that the problem here is not the research or the expertise of the specialist world but that there is still need for important changes and orientation on political level in order to reach progress here.

Different mentality and different understanding of the value of an original or of authenticity in East and West is in the same time a problem, since in the byzantine tradition, in the orthodox art an artistic work, for example a saint icon, may be repainted or reshaped without losing value through this. Translated to architecture this means in the powerful institutions in Russia that demolition and replacement with construction materials from today is propagated as value increasing mean in the conservation of important cultural heritage.

On the background of an international comparison of cultural heritage of Modernism in Europe and exactly on the background of the current international experience it is a very important project to define the Werkbund neighbourhoods as European cultural heritage and to make a common application for recognition.

Naturally there are many outstanding, exemplary models for modernism neighbourhoods in Europe, for example in the Netherlands with Out, in France with Lurcat and naturally Le Corbusier, in Copenhagen with Jacobsen and in Frankfurt with the architects of Neues Bauen around Ernst May. Naturally the ideas of the Werkbund members or those of those architects and designers engaged in the other projects cannot be separated from one another. It remains an common inspired being and an action influenced by one another.

The Werkbund neighbourhoods had from the begin a land spanning approach for international cooperation and exchange, the role of prethinker with prototypes, with special programme topics and the approach, to invited some of the best international specialists quasi in competition for the best solutions. This happened parallelly and in accordance with the developments of Moderns and to the meetings and results of the CIAM.

Also in the years after 1945 there were known international building exhibitions, with invitations to artists and architects from different countries and with progressive questions. The maybe best known ones in Germany are the Interbau Berlin 1957 and in recent times the IBA Emscher Park 1998-99. Also in the Werkbund there were always new efforts to mix in with a new application and for example a new Werkbund neighbourhood. But the Werkbund had after 1945 to deal with much more questions than

before and the growing critique on the developments of the industry and the developments in architecture and urbanism asked for larger and larger discussions. It was not anymore possible to do a comparably influential, only from the Werkbund out, “Building exhibition”, so that the Werkbund neighbourhoods remain the only built examples in the name of the Werkbund.

(„UNESCO stays for United Nations Educational, Scientific and Cultural Organization, It is one of the 16 legally independent special organisations of the United Nations. To time there are 195 member states represented in the UNESCO. It has the headquarters in Paris.

The leading idea of UNESCO is: „since wars begin in the minds of men, it is in the minds of men that the defences of peace must be constructed “. This stays in the preamble of the constitution which was signed on the 16th of November 1945 in London.

From the experience of WWII the following lessons was drawn “a peace based exclusively upon the political and economic arrangements of governments would not be a peace which could secure the unanimous, lasting and sincere support of the peoples of the world, and that the peace must therefore be founded, if it is not to fail, upon the intellectual and moral solidarity of mankind”

UNESCO hast he task „to contribute to peace and security by promoting collaboration among the nations through education, science and culture.“
4th November 1946 the Constitution of UNESCO was legally binding.)

9.5 International exchange and expertise

In the above it was demonstrated how the international cooperation of artists, the one another inspiration, the competition, the exchange have led first to the huge richness in arts and architecture. In what regards the architecture of Modernism, there are a number of organisations such as ICOMOS but also NGOs such as for example MAPS or networks, such as docomomo or Twentieth Century Architecture Society. These can work only so well and strong as the politics, the specialists world and the public, for example the civil society want and promote. Since many years there is the international exchange to the heritage of Avant-Garde architecture of the Soviet Union. Numerous meetings, workshops, excursion and publications, not to last the big common international conference “Heritage at risk” of ICOMOS and DOCOMOMO and with more than 300 participants from all over the world have created a huge potential on research results, expertise and big media interest and publications, but in the aftermath no substantial progress.

This was 2007. Still it is valid the information received 2004 from the author in New York from a Russian architect that, that what is moving us, to preserve the buildings of Modernism for us and for the world after us as architecture heritage, is not of interest for the power who do not decide the opposite but follow other interests.

Best example is the former city major Luschkow who defamed the building of Modernism as wrong development, but in opposition wanted to be world heritage the reconstructed Christ Saviour church as first building of 20th century. International exchange and expertise are not automatically possible and must be sometimes fought for.

The role of politics is not to be valued enough, since often it is determinant in some states.

As the Villa Tugendhat in the year 2008 was already publicly accessible but before a conservation action, for the call of which there were formal problems, which led to civil processes and a worldwide attention, the house remained for years in a waiting position. The foreign specialists felt themselves always with less power regarding the depreciation of the building and the city came at the same time more under pressure because of the growing critique. Finally international meetings, the openness of the local responsible of the director and the higher preservations and international conferences for example the docomomo exchange or the conference Materiality led to the first understanding and finally determinant steps of the city to the solution of juridic problems.

Since it was about world heritage and 2/3 of the costs were EU funding money the city decided to have an international experts advisory board with knowledgeable experts in the field of research and preservation of the buildings of the Modernism, abbreviated with THICOM.

This should prove as a fortunate case in the whole process of the restoration, as the already commissioned firm UNISTAV had not sufficient experience and the Villa Tugendhat was in danger through restoration to lose even more original substance (ex. All plaster surfaces). Almost all recommendations of the expert team were confirmed at the end by the city board and executed. The commissioned, stone, timber and metal conservators and specialist firms were carried away and performed on the basis of high expertise partially exceptional work. The specialist authority of the responsible on site is usually not sufficient. It was the enthusiastic influence of the international experts, the interested public and the specialist intensive, international exchange which was directed towards success which could be finally achieved. There were the confer-

ences/exhibitions/publications/lectures/excursions/films/workshos which led to success.

Expertise on one side / politics on the other side are indispensable.

The newest findings, the best result can be edited according to the author's experience, step by step, despite competition, resentments or contradictory specialist positions and attitudes.

Usually it needs intensive research, expertise, intensively as it can be done discussions or the debate about the concept and the contents and the details off he preservation of the built cultural heritage.

But it needs first the understanding of the politically responsible, their conviction, their sustainable support.

The author hopes, that the Werkbund neighbourhoods not only one day, but already in the close future will be a common European cultural heritage.

9.6 Chronology

- 1927 Werkbundsiedlung Stuttgart „Weißenhofsiedlung“
- 1928 Werkbundsiedlung Brünn „Nový Dům“
- 1929 Werkbundsiedlung Breslau „WUWA“
- 1932 Werkbundsiedlung Wien
- 1932 Werkbundsiedlung Neubühl in Zürich-Wollishofen
- 1932/33 Werkbundsiedlung Prag „Baba“

References:

- „Tendenzen der zwanziger Jahre“ Dietrich Reimer Verlag Berlin, 1977
- „Zwischen Kunst und Industrie. Der Deutsche Werkbund“. Neue Sammlung München, 1975
- „Die Architektur der Moderne“, Kenneth Frampton, DVA, 8.Aufl. 2004
- „Der Werkbund, in Deutschland, Österreich und der Schweiz“, Lucius Burckhardt (Hrsg.) DVA, 1978



Fig. 58. Narkomfin building, Moscow, architect Moisei Ginzburg with Ignaty Milinis (1928-1932). Photo: Alex Dill.



Fig. 59. Narkomfin building, Moscow, architect Moisei Ginzburg with Ignaty Milinis (1928-1932). Photo: Alex Dill.



Fig. 60. Narkomfin building, Moscow, architect Moisei Ginzburg with Ignaty Milinis (1928-1932). Photo: Alex Dill.



Fig. 61. Rusakov Workers' Club, Moscow, architect Konstantin Melnikov (1927-28).
Photo: Alex Dill.

10. Book review: Mendelsohn - Der Einsteinturm. Die Geschichte einer Instandsetzung. Norbert Huse (ed.) / Maria Bostenaru

The book Mendelsohn - Der Einsteinturm. Die Geschichte einer Instandsetzung [Mendelsohn – the Einstein tower. The story of a restoration], editor Norbert Huse, provides the documentation of a restoration endeavour in the last decade of the 20th century of the Einsteintower in Potsdam, Germany. Known as a iconic build of reinforced concrete Avant-Garde, the book explores the use of concrete in the building, the limits in employing it and the damages which resulted from the inhomogenous employment. Through this employment of new materials for that time a building which will have to be maintained at regular intervals resulted. The restoration was done 1997-1999 and to the time the book was published no similar documentation material on a building of the Modern Movement existed. The chapters in this edited book present not only results, but also the considerations which led to conservation decisions.

Mendelsohn - Der Einsteinturm. Die Geschichte einer Instandsetzung.

Editor: Norbert Huse

Published by Karl Krämer Verlag Stuttgart + Zürich
and

Wüstenrot Stiftung, Ludwigsburg
2000

ISBN 3-7828-1512-2

Price: 25 €

Language: German

Series Baudenkmale der Moderne

In the same series

Doppelhaus Le Corbusier / Pierre Jeanneret: Geschichte einer Instandsetzung von Claudia Mohn (2006)

Gropius Meisterhaus Muche/Schlemmer, Die Geschichte einer Instandsetzung, von August Gebeßler (2003)

Scharoun. Haus Schminke: Die Geschichte einer Instandsetzung von Berthold Burkhard (2002)

The book “Mendelsohn – Der Einsteinturm. Die Geschichte einer Instandsetzung“ [Mendelsohn – The Einsteintower. The Story of a Restora-

tion] was edited by Norbert Huse, professor at the chair for art history of the Technical University of Munich and published by Karl Krämer (Stuttgart, Zürich) in cooperation with the Foundation Wüstenrot (Ludwigsburg). The Foundation Wüstenrot is known for its engagement in promoting good practices in conservation and restoration, but also in sensible building in historical context. The book documents the renovation of the renowned Einstein-tower of the architect Hans Scharoun in the Science Park “Albert Einstein” in Potsdam, which became a landmark of Modern architecture through its free shape which suggests building out of concrete. That it is not so, we will find out reading this book. The book was published in 2000 in German language. It is the first book in a series called “Baudenkmale der Moderne” [Monuments of Modernity], in which series appeared also the story of renovation of the house Schminke by Scharoun (2002), of the Meisterhaus Muche/Schlemmer by Walter Gropius (2003) and of the coupled house by Le Corbusier/Pierre Jeanneret in the Weissenhof Siedlung, Stuttgart (2006). We hope to provide reviews of these books in the following numbers of the journal. The book consists of 12 chapters, preceded by 4 introductions, written by 17 authors and followed by a chronic of the restoration works and a technical cassette. The chapters are not subdivided by subtitles; they only have numbered parts in the shape of essays. The authors are both from academic field and from conservation practice, and they are architects, restorers, engineers, art historians, landscape architects, monument preservers. The book has 208 pages and numerous illustrations.

In the introduction, Georg Adlbert from the Wüstenrot Stiftung tells that the endeavour was conceived as a pilot project. Pilot projects are punctual actions thought give an example which spreads and becomes a better routine. As a pilot project, so Adlbert, research took place parallel with the performance of the works in order to learn lessons which can be transferred to other constructions of Modernism, which was possible through the scientific accompaniment of the whole process in an interdisciplinary team.

A second foreword is given by Peter A. Stolz, administrative leader of the Astrophysical Institute Potsdam.

A further foreword is given by Detlef Karg, director of the Office for Monuments of the state of Brandenburg, where the Einsteinturm is located. Karg points the attention to the fact that the Einsteinturm needed maintenance immediately after construction, due to its problems of construction physics, as we will see in the chapters of the book.

The final foreword is given by the editor, highlighting the way how research and practice went hand in hand in this multiannual endeavour. To the time when the works were finalized, no other monument of Modernism was

so well investigated as this one. But, so the editor, all investigations were done with the purpose to serve conservation. At the same time, so points out Huse, the Einsteinturm is a unique piece, and, as such, experiences and conclusions cannot be transferred so easily to other works, but the pilot project served to test if the monuments of Modernism can be approached with the conceptual and practical instrumentarium of monument conservation, what seems to be proved.

The first chapter is written by Norbert Huse as well. It serves to show the “facetes of the monument”. One important aspect Huse investigates is the dependence of the shape of the Einstein Tower and the material reinforced concrete – employed or rather not. More “facettes” serve to display one: the discrepancy between request and realization. Huse underlines that the Einsteinturm is a “monument of the teory of the relativity” Huse quoted Mendelsohn about the not-employment of reinforced concrete: “the formwork should have been done by ship constructors”. This was observed later on also by Hilberseimer, quoted by Huse, that the shape of the Einsteintower does not correspond to the laws of construction in concrete. In this approach he is not alone: he sees, so Huse, the anticipation of a reinforced concrete architecture in the works of Ernst Maria Olbrich, whose works in Darmstadt are illustrated, which were, however, built in timber and material. The next one quoted is Henri van de Velde, where he finds concrete in Jugendstil, as search for the shape, for morphology. He underlines a topic of today, of “nature and technique”, the former giving the theme and the later the morphology. The archive research of Huse finds enquiries from Mendelsohn asking for the dependence of the building shape not only from the function, but also from the material. Of course, this chapter only approaches the theories on building in reinforced concrete and its morphological language with which Mendelsohn was confronted, and not others known to us, such as Medgyaszay in Hungary with the theatre in Veszprém, or the tectonics theory of Kenneth Frampton⁶⁸.

The second chapter is written by Christine Hoh-Slodczyk about the development from the sketch to the tower, from sketching to constructing. Also Hoh-Slodczyk remarks the characteristic of the photos which inspires, through its monolithic shape and the uneven surface, the execution out of concrete, which spread in literature and was never contradicted by Mendelsohn. Also, so Hoh-Slodczyk, the grey colour of photographs suggested

⁶⁸ Kenneth, Frampton, “Studies in Tectonic Culture. The Poetics of Construction in Nineteenth and Twentieth Century Architecture”, ed. John Cava, MIT Press, Cambridge MA, 1995.

concrete – contradicted by the fact that the tower was coloured. We wish to add that even as late as in 2006 we found the Einstein Tower presented as case of concrete construction at the fib international concrete congress in Naples 2006. This again was a characteristic of the time – the same mistakes in literature are made regarding other buildings known to us, such as the building in the Népszínház street by Béla Lajta in Hungary. The uneven plaster surface was, according to the investigations by Hoh-Slodczyk, however, replaced in 1930 with an even one. The research of Hoh-Slodczyk spans not only the published drawings and archive photographs, but also letters and the construction descriptions of Mendelsohn. So Mendelsohn in the letters wishes a reinforced concrete construction, has, however, his doubts because of the lack of cement, and in later letters it is presented only as mixed construction, as it was constructed at the end: the lower part of the building would have been in reinforced concrete, the tower itself in brick masonry. The research of Hoh-Slodczyk goes further in analyzing the documents due to which the material for the execution changed from concrete to brick masonry: documents on costs estimations in both materials. With run of the time Mendelsohn renounced also at the intention to do the window part in concrete (Hoh-Slodczyk), which, as we will later see, led to problems in construction physics. The analysis of written documents is completed by that of the drawings of models and of building authorization plans, which, at some moment, show wooden floors. A return to the initial reinforced concrete

model vision is seen by Hoh-Slodczyk in their partial replacement with steel-stone floors, the so-named Kleine'sche floors. These type of floors we wish to add that they were usual in Germany at that time, as we documented in a report about housing of Modernism⁶⁹.

The next chapter is written by Christine Hoh-Slodczyk as well and is about damages and repair works 1927-1995. It shows in a first page size photo the building site at the Einstein tower during the first reparations in 1927-28. So the first reparation measures were necessary much earlier than intended, after five years only. Again, archive search of affirmations displayed that the damages are caused not by execution mistakes, but by concept mistakes. One of the causes, so the findings of Hoh-Slodczyk, was that the masonry was thinner in some places, a cause for building damages till

⁶⁹ Maria, Bostenaru Dan, "Prefabricated metal construction of the Modern Movement", in *World Housing Encyclopedia- summary report 2004*, ed. Svetlana, Brzev, Marjorie, Greene, EERI, Oakland CA, 2004, report 95. Also available at <http://www.world-housing.net/> (22. December 2010)

today. Another reason was the connection between reinforced concrete and masonry and shotplaster which did not protect well from weathering. It is quoted how it was prescribed to replace some reinforced concrete parts, such as the parapets, against which Mendelsohn protested. 1945 the tower was damaged again, through an explosion, damages which were repaired in the years after the war, so the author. Other photos, first published 1966 and republished in this book, taken 1964, show damages on the façade from humidity, and the building site for reparations in 1978. In 1998 the tower was damaged by a fire, also documented by a photograph.

Robert Graefrath and Jörg Limber wrote a chapter on notes from the monument protection on the contemporary repair. They begin with the principle of substance preservation: in a repair process it must be evaluated if the element is part of the monument protected substance from the point of view of technique and building history. The authors see that given the renowned shape of the tower the water could never flow away properly. Also, the solution of mixing concrete and masonry led to a technical non-optimal solution and consequently to damages. One of the advantages, so the authors, is the public ownership of the tower, which simplified the cooperation among the actors in the restoration process: it made possible, among others, a detailed documentation of the substance and of the former reparations, in frame of which the monument protection concept was developed. We want to point here to the fact that in a book by Nägele about the restoration of the Weissenhof Siedlung⁷⁰ detailed matrixes about the wishes of the different actors involved in monument protection are presented. The monument protection concept presented by the authors was focused on the fact that the shape of the Einstein Tower determines the largest part of its monument value. Two examples of applying the monument protection principle are given: the parapets of the windows and their metal part and the colour of the tower.

Sabine Schmidt-Rösel wrote a chapter about the savings of construction costs through competence. One preliminary observation of Schmidt-Rösel is that architects and engineers, paid for work on a monument according to HOAI (the honorary order for architects and engineers) don't have always the necessary knowledge of building physics, chemistry or biology; this must be transferred to specialist laboratories. Experts are necessary, so Schmidt-Rösel in case of a historic building, other than at new buildings, because today expertise in materials usual earlier in time is not given. Ex-

⁷⁰ Hermann, Nägele, „Die Restaurierung der Weißenhofsiedlung 1981-1987“, Karl Krämer, Stuttgart, 1992.

amples are given: the decision about plaster outgoing from the wish to protect from weathering, the need for specialists for concrete technology, in order to determine the causes for rifts or for landscape architecture, as some parts of the building are covered by vegetation. Schmidt-Rösel concludes that from an economic point of view a project as the restoration of the Einstein tower needs cooperation among the partners.

The next chapter is written by Gerhard Pichler and it is called “Baukonstruktion or why does the Einstein tower remain a maintenance case”. “Baukonstruktion” denominates in German the construction process as well as the result, how the building elements are connected in the construction. It is the chapter which presents which parts of the building are in reinforced concrete and which in masonry, in coloured drawings based on the drawings of Mendelsohn from 1930 publications. Pichler affirms that Louise Mendelsohn spreads a theory that in the years after WWI there was not enough steel for the reinforcement. This, however, contradicts the use of steel for the Klein’sche floor – much more, in Germany when the Ruhr zone was in blossom, steel was much easier to find than reinforced concrete and it was common for the structure of modernist buildings⁷¹. Also Pichler gives the Mendelsohn quote given earlier in the book by Huse that for the formwork of the concrete ship buildings would have been necessary. Pichler develops further the idea that round shapes are possible in reinforced concrete, as Saarinen built the airport building in New York, but in a mathematically designed shape where formwork out of straight wooden boards was possible. We would like to suggest as further reading an article published after this book about the use of formwork in Gaudi’s Sagrada Familia⁷². The deficiencies of the Einstein Tower are caused, so Pichler, by the fact that the technique was too new. Pichler explains that with the concrete technology of today the resistance to water is also possible, and highlights that the degree of reinforcement in Mendelsohn’s tower was 1/10th of what would be considered today. The questions Pichler documents that there were put in

⁷¹ Maria, Bostenaru Dan, “Prefabricated metal construction of the Modern Movement”, in *World Housing Encyclopedia- summary report 2004*, ed. Svetlana, Brzev, Marjorie, Greene, EERI, Oakland CA, 2004, report 95. Al-so available at <http://www.world-housing.net/> (22. December 2010)

⁷² Josep, Gómez-Serrano, Ramón, Espel, Rosa Grima, Marc C. Burry, Antonio Aguadoa: “Evolution of the Formwork Used in the Temple of the Sagrada Famlia”, in *International Journal of Architectural Heritage*, Volume 3, Issue 2 April 2009 , pages 93 – 109. Online at <http://www.informaworld.com/smpp/section?content=a909206296&fulltext=713240928> (22. December 2010, free because of most cited status)

the “Baukonstruktion” investigation were exactly these: which are the materials, where are the junctions between brick masonry and concrete, what is the reinforcement, which are the causes of the rifts. From a structural point of view the building is well done, so the result of the investigations Pichler presents to us, and the rifts are given by thermal causes, and by changes of material or corrosion of the reinforcement. After the investigation it was proposed for the repair a mortar enriched with cement (Polymer Cement Concrete) and for the damages from different temperatures an injection resin was used. The measures are illustrated with pictures. The main problem was, in the conclusion of Pichler, the inhomogenous building: thick and thin, masonry and concrete.

The next chapter is written by Uwe Erfurth and is about the plaster. The plaster was, so Erfurth, altered by reparation, and damages from fire, explosion, humidity. A necessary investigation was the compatibility between the plaster with cement content and the brick material. Plaster was extracted from more places: 1, 2, 3, 4, 5, 8, 9, 14 and 17 are documented in the chapter. Several photos at the microscope are shown. Given the frequent changes of material of the structure, it is very difficult also today to design a unitary concept for the plaster, so Erfurth, especially because reinforced concrete was largely unknown at the moment of construction, so in the new plaster concept the transitions between masonry and concrete have to be designed. Proposed was a new plastering, but from monument protection point of view it was asked the original cannot be kept. After investigation of similar cases, parts of this could be kept, documents Erfurth, and also the removal of non-historic plaster was a challenge not to damage the masonry.

The next chapter is dedicated to plaster as well. It is written by David Hoolly and Gert Th. Mader, and is about mapping of plaster. In the beginning the authors remark that this brings together the “historical” building research (that of the historical construction) and of newer building research (research of materials and damages). The damages, so Hoolly and Mader, are determined by the material, construction but also the passing of time. The authors worked with the written and photographic documents given by Hoh-Slodczyk, but no photographic documents were systematic. Hence, they document that the method of stratigraphy proved more reliable, and that photogrammetric measurements were used as well. As this is dependent on light, a stereometric view can improve a lot, so Hoolly and Mader. The mapping of the rifts in plaster is illustrated. A dense photogrammetric scaffold proved too expensive, so on a photogrammetric grid it was proposed to use hand work (Hoolly and Mader). The result was useful to determine where interventions are necessary, conclude the authors: the longer the time

passed since the intervention, the more lessons can be learned on where damages are worsening and where the situation is stable, or about the work style of Mendelsohn in order to elaborate a conservation solution.

The next chapter is about a related topic, the colour and is written by Werner Koch. Remains from the original shotplaster were looked for and categorized, microscope photographs are shown, and the categorization of colours in different rooms, based also on the grey shades in historic photographs.

The next chapter is a report “from a modern construction barrack” about the renovation, written by Helge Pitz. The look for the causes and the reparation went hand in hand, so Pitz. The concept of “construction barrack” included daily discussions between the architects and the construction workers which assured a feedback principle so some decisions had to be reviewed in the light of new findings. The renovation is not seen by the author as the last one, but as one of the reparations of the tower, documented and foreseen with an intervention plan and regular controls. Examples given are the windows, where the beams did not respect the laws of building physics. Another subchapter is dedicated to the concrete. Numerous damage photographs and drawings of technical details of construction measures are provided. A further subchapter is dedicated to the plaster. It is documented to which percent the original plaster could be kept, bound or not, including in coloured drawings. New materials were also employed, for example polymers to protect the metal coverings. The reversibility of such measures is however not proved. A recent research wishes to prove the contrary⁷³. Another subchapter is the colour. The final chapter is dedicated to the maintenance. The Einstein tower is seen as a patient, so Pitz. It is yet another concept taken from medicine, as diagnosis and pathology, both used in construction and restoration. The building has, according to the author, in itself the tendency for self-destruction: heat bridges, for example, and the new materials must be investigated on durability, so controls are done 1-2 times a year and the heating of rooms is limited.

The next chapter is about the exterior assets, written by Joachim G. Jacobs and Petra Hübinger. The sketches of Mendelsohn, so Jacobs and Hübinger, show an intense preoccupation of the connection the basement

⁷³ Georgos, Karydis, “Advanced Strengthening Systems for Conserving 20th Century Concrete Heritage: The ethical justification of utilizing Fibre Reinforced Polymer (FRP) Composites”, in Proceedings of the 2nd fib Congress, June 5-8, 2006 – Naples, Italy (CD), paper #0209; Condensed paper (extended abstract) in Volume 2 of printed proceedings, fib Italia, Napoli, 2006, pp. 770-772.

provides between the tower and the environment. The plan with the slopes covered with vegetation was done by Richard Neutra, who worked together with Foerster and Amman, some of the best specialists in Germany that time, according to Jacobs and Hübinger. The chapter documents the view in different timepoints, and also the fact that through the reparations after WWII some of the original concept of Mendelsohn and Neutra went lost. In frame of the renovation project the exterior assets were documented and photographed in 1998. It was a reconstruction process, dictated by the necessity to renovate the building and supported by the fact that not much original substance of the exterior assets was kept, so Jacobs and Hübinger.

The last chapter is written by Jürgen Staude about the instruments of the Einstein tower, how were they and how are they used. The scientific use of the Einstein tower, so Staude, is an important part of the restoration concept. A museum like use was not wished for and 75 years later the Einstein tower was foreseen to contribute to the astrophysics in Potsdam, is the optimistic concluding paragraph of the book, as no conclusion chapter is provided.

The book is very well written, well illustrated with colour and black and white figures and line drawings. It is recommended to everyone who works in the research of how to conserve and restore today buildings of the Modern Movement. Particularly in countries where this is rarely undertaken, it proves a unique resource to learn from experience from Western Europe. The research on the employment of reinforced concrete is particularly insightful, as this is a field research has been done only rarely: the historic concrete. Lessons seem to have been learned, as, when we visited the sites of Giuseppe Terragni's buildings in Como, Italy, in 2009, we saw the same studies of stratigraphy as presented here. We wish that more lessons are being learned.

A drawback of the book is that it is written in German, which makes it accessible for a limited audience. Also, since the time we bought it, in the summer of 2006, it seems to be out of stock. We hope to have provided a comprehensive review which would encourage further literature research in this direction, maybe through contacting the contributors to learn more about the work they have done.



Fig. 62. Einstein tower, Potsdam, architect Erich Mendelsohn (1919-1922), Photo: M. Bostenaru, 2002.

11. Forms / Maria Bostenaru

In this work we filled three kinds of forms. The first two kinds were filled by Maria Bostenaru.

The first bunch of forms regards architects of Modernism throughout Europe. 13 forms have been filled after the model of the Routledge REM encyclopedia.

The second bunch of forms regards the ones filled in the seminar at the University of Karlsruhe on new construction in the 20th century in Eastern Europe. Here we present the forms filled by Maria Bostenaru for Hungarian early rationalism architecture. The forms filled by colleagues were useful into finding addresses of first half of the 20th century architecture in Eastern Europe, an aspect not covered frequently.

11.1 Branco, Viriato Cassiano (1897-1970)

Photo at: <http://www.rtp.pt/rtpmemoria/?t=Vida-e-Obra-de-Cassiano-Branco.rtp&article=3279&visual=2&layout=19&tm=46>

The Portuguese architect Cassiano Branco studied first at the School of Fine Arts in Lisbon but changed to technical-industrial training from where he graduates. After travels to Paris, Bruxelles and Amsterdam rejoins the School of Fine Arts. Continues to travel, until he starts an architecture career with the first building on Avenida da Liberdade. It is followed by a couple of studies for cinema “Eden”, which, at the end, is built differently from the plan and strongly modified in the 1990s to include a courtyard behind the facade with green elements. His main works were raised in the 1930s. In this time Art Deco and Modernism influenced his work. The 1920s were marked by the introduction of reinforced concrete in Portugal in building in the work of the architects of Modernism. However, his architecture is kept simple and is simple to imitate. It is recognised that numerous imitating works were raised in the Portuguese capital (Tostoes, 1997). However, the floor plans were not particularly innovative. The buildings are situated in the north-western part of the centre, where the city extended with Avenidas Novas, still on the hilly part of Lisbon close to the Parliament. He was an opponent of the “New State” (Estado Novo) of Salazar and thus excluded from work in the postwar time (however, Portugal was not involved in the Second World War and as such the division in interwar and postwar is somehow artificial). Another large scale public work which was finished by others as the cinema Eden was the Colosseum in Porto. His in-

fluence in these buildings is however clear. Grand Hotel de Luso and the building at London Square show a difference in his approach of Modern Architecture, with a link to tradition, which may be attributed to long time work on Portugal of the Little Ones, where he displayed national typologies across Portugal in miniature.

List of works

- 1928 Car Stand Rios de Oliveira, Avenida da Liberdade, Lisbon, Portugal
- 1929-32 Projects for Cinema Theatre “Eden”, Lisbon, Portugal
- 1933-1936 Several buildings and villas in Lisbon (Av Alvares Cabral; Avenida António José de Almeida, n ° 10, 14, 16, 24, etc.), Portugal
- 1934 Victory Hotel, Avenida da Liberdade, Lisbon, Portugal
- 1937 Buildings in Av Defenders Keys, Rua Nova de S. Mamede, etc., Lisbon, Portugal
- 1937-1962 Portugal for the Little Ones, Coimbra, Portugal
- 1938-1940 Grand Hotel do Luso, Lisbon, Portugal
- 1939 Coliseu do Porto, Rua Passos Manuel, Porto; Portugal
- 1940 Plan of urbanization, the Portuguese World Exhibition , Lisbon, Portugal
- 1951 Building on the London Square, Lisbon, Portugal

References and further reading

- A.A.V.V. (1991) Cassiano Branco, uma obra para o futuro. Lisbon: Edições Asa
- Becker, A., Tostoes, A., Wang, W. (1997) Architektur im 20. Jahrhundert, Bd.3, Portugal, Munich: Prestel.
- Tostoes, A., Jorge, F., Nunes da Ponte, T. (2003) Architectural Map-Guide of Lisbon/Mapa de Arquitectura de Lisboa, Lisbon: Argumentum.

Visual material:



Fig. 63. Hotel Victoria, architect Cassiano Branco (1934), Photo: M. Bostenaru, 2013.



Fig. 64. Building on Alvares Cabral avenue (1935), Photo: M. Bostenaru, 2013.



Fig. 65. Building on Rua Nova de São Mamede (1935), Photo: M. Bostenaru, 2013.



Fig. 66. Cinema Eden, architect Cassiano Branco. Photo: M. Bostenaru (2013).

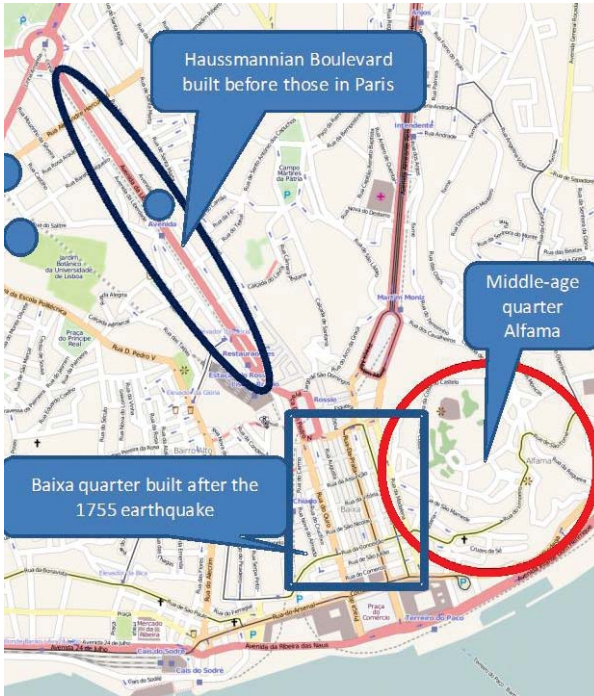


Fig. 67. Location of the extension of Lisbon with Avenidas Noves and (blue dots) where are situated the Cassiano Branco buildings Victory Hotel and Alvares Cabral and Sao Mamede blocks of flats. Cinema “Eden” is next to Baixa. After Bostenaru and Dill (2014).

Portugal of the Little Ones (Portugal dos Pequenitos) architecture
http://pt.wikipedia.org/wiki/Ficheiro:Coimbra_pp_acores.JPG

To be compared with real architecture, ex.



Fig. 68. Combination of white plaster and volcanic stone in a church in the Azores architecture, Photo: M. Bostenaru, 2008

Traditional houses
[http://pt.wikipedia.org/wiki/Ficheiro:Coimbra_pp_\(17\).JPG](http://pt.wikipedia.org/wiki/Ficheiro:Coimbra_pp_(17).JPG)
 Coliseu of Porto
http://pt.wikipedia.org/wiki/Ficheiro:Cassiano_Branco_Coliseu_Porto_3279.jpg
 Grand Hotel Luso
http://pt.wikipedia.org/wiki/Ficheiro:Grande_Hotel_Luso.JPG
 Building at London square
http://pt.wikipedia.org/wiki/Ficheiro:Pra%C3%A7a_de_Londres_Cassiano_Branco_6837.jpg

11.2 Bordenache, Richard (1905-1982)

Richard Bordenache (1905-1982), graduate of the Architecture School in Bucharest (1929) and scholarship holder in Rome 1930-32 made studies about the Santa Trinita di Venosa church, published in *Ephemeris Dacoromana VII* (1937, p. 1-76). The work contains numerous building survey plans and photographs, completed with the reconstruction of the demolished parts. The church presents architectural influences from the time of the entrance of nomads in Italy. Although Bordenache returned and activated as architect mainly in Romania, but also in frame of the Commission for Historic Monuments, being professor at the "Ion Mincu" Architecture Institute (1944-71), his son, also an important architect, emigrated to Karlsruhe, Germany. The nephew is a digital artist. In the interwar time Bordenache built works like the AGIR block of flats, a functionalist building plated in stone, like the Italian Rationalism works of Terragni. Among numerous interior design works is also the extension of the building of the Romanian Cultural Institute in Alexandru alley. From the villas designed we name the one for important and mobile art historian Tzigara Samurcaș. In the postwar time remarkable is a so-called palazzo on the southern part of the Palace/Revolution square, thus covering the brand wall of the Generala interwar block of flats, a new Italian influence, but of Novecento. Later on, from inner city locations, Bordenache turned towards the lakeside of Bucharest, with interventions in Snagov, Mogoșoaia and Floreasca. Building at water was prize awarded for again a classicistic building, the Loisir house for Communist nomenclature. Bordenache was also active in interwar time post-disaster reconstruction outside Bucharest, with the Corbeni intervention in Argeș county after a flood. Remarkable in interwar time are also the industrial buildings.

Works in Bucharest

- 1933 Costea house, parcelarea Basarab
- 1934 House dr. Enescu, Viilor str., house Tzigara Samurcas, M. Kogalniceanu str., house Ing. Pâslaru, Sf. Elefterie str.
- 1934-36 interior design National Art Museum, Kiseleff avenue
- 1935 Ursescu house, Roma str., eng. Portocală house, parcelarea Basarab, The school of conductors at the Ministry for Public Works and Constructions
- 1936 Prof. eng. Nicolau house, Dr. Lister street, Eng. Epure house, parcelarea Basarab
- 1937 Th. Emandi house, Clucerului str., block of flats AGIR, Eminescu street, painter A. Jiquid house, Neculce street, interior design of the house Boteanu-Pipidi, Calomfirescu street

1938 IOR factory Sos. Vergului, interior design eng. Slăvescu house, Paris street, interior design, furniture and special installations, former Morțun-eng. Malaxa house, Alexandru alley, dr. Palada villa, Otopeni, k. 18, eng. Dumitreco house, Colentina

1939 eng. Runcan house, Mogoșoaia, Devechi house, Floreasca lake, Oiaga house, Domeniilor park, restoration and interior design of the Girls school of Ion Mincu, modification prof. eng. Vasilescu-Carpen house, Domeniilor park, design of the exhibition of the Pipe factory, N. Bălcescu boulevard

1941 block of flats behind AGIR

1942 extension of IOR factory

1945-46 interior design of the flat of eng. Holzer, Sf. Apostoli street; interior design of the block of flats in Beldiman street

1947-48 interior design and installation Panduri hospital, dormitory for disciples 23 august factory

1948-49 transformation of the reunion hall and the central body of the RPR Academy

In frame of design institutes:

1951-52 „Generală” brand wall, Calea Victoriei, Loisir house in Snagov (prize awarded work), interior and exterior design Otopeni sanatorium, landscape design and decoration Snagov assembly

1953 restaurant building for the Youth Festival Șoseaua Viilor

Visual material:

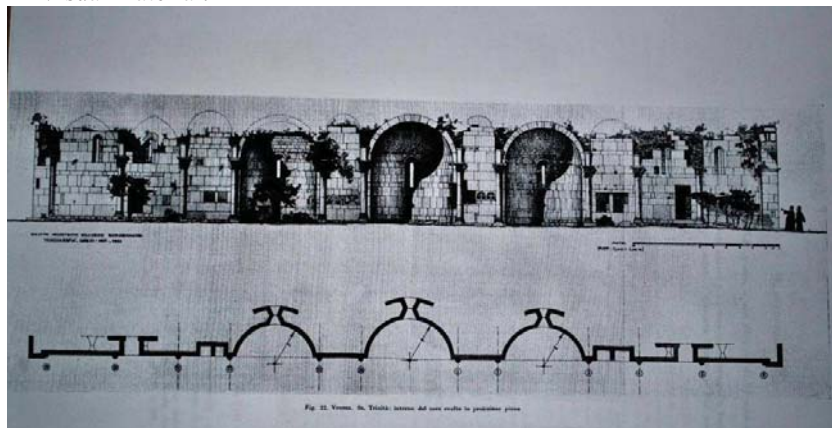


Fig. 69. Richard Bordenache. Building survey Santa Trinita di Venosa (Ephemeris Daco-romana, VII/1937, Fig. 22)

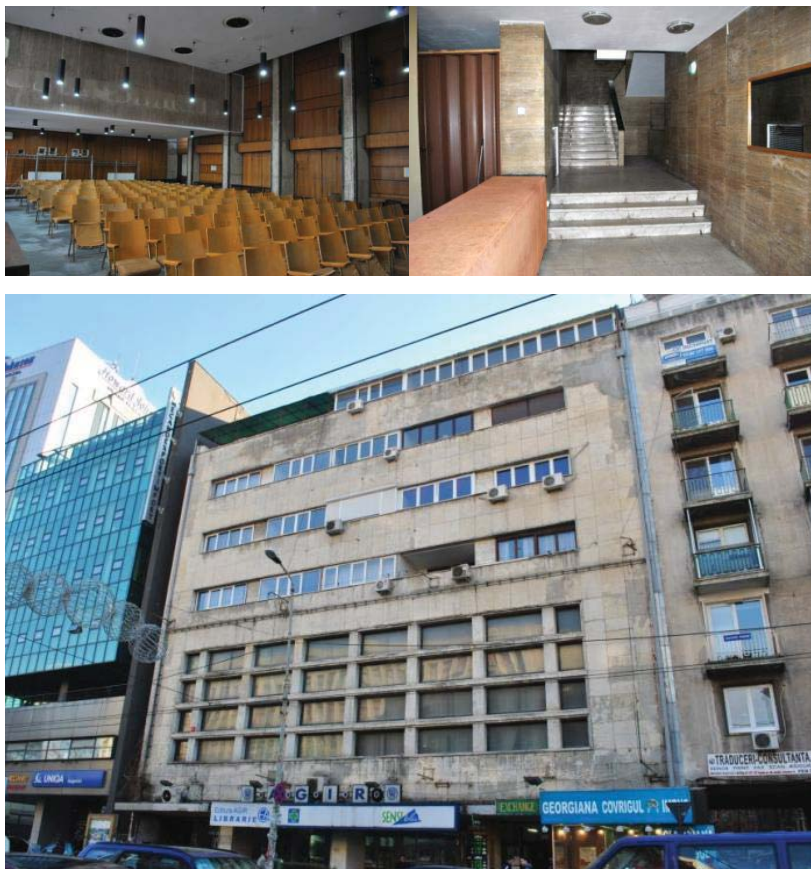


Fig. 70. Richard Bordenache. Functionalist architecture. AGIR/ASIT palace (1935-37). Photos: M. Bostenaru, 2012, 2014.



Fig. 71. Richard Bordenache: An Italian type palace, closing the brand wall of General Building (1954). Photo: M. Bostenaru, 2012. The original Generala building. Archive plans from the Town Hall of Bucharest city (PMB fond tehnic)



Fig. 72. Richard Bordenache: Flood reconstruction in the village of Corbeni, Argeş county. Landscape, community building and a villa. Photos: M. Bostenaru, 2012. Archive plans and facade, Argeş county archives.

11.3 De Finetti, Giuseppe (1892-1952)

The Italian architect and urban planner Giuseppe de Finetti was trained first in Berlin and then in Vienna as student of Adolf Loos. The studies were interrupted for the war. In 1920 returns to Italy, first Bologna, then Milan. Although from Adolf Loos he learned to renounce at decoration and work with volumes (“ornament is crime” used Loos to say) he finds a home in the Milan Novecento and its classicism leaning to the 18th century. Annegret Burg sees the Novecento developing along him together with Giovanni Muzio. His first preoccupations were dedicated to the architecture of hotels. They included unrealised projects, an intervention on an existing buildings, and theoretical contributions to a book. 1922 marked also his beginning interest for urban planning, participating to a competition for an island on Como lake. 1924 he buys a terrain to build a neighbourhood according to the urban plan of 1912, in which he intends to preserve both the garden and the existing buildings. From the whole complex only two buildings were erected, his only housing buildings. One of these, Casa della Meridiana, relieves the teaching of Adolf Loos in the composition of volumes, the so-called stappeled villa, a multifamily housing disposed like superposed one family housing. The stappeld concept was however dictated by the preservation of an ancient tree on the site. In 1927 with A. Alpagò Novello, T. Buzzi, O. Cabiatì, G. Ferrazza, A. Gadola, E. Lancia, M. Morelli, A. Minali, G. Muzio, P. Palumbo, G. Ponti, F. Reggiori wins the second place in the competition for the urban plan of Milan. His urban planning works were occasion for writing, and for participation to congresses. His theoretical work was interrupted by the work, but 1945 he founds the magazine *La città*. 1951 he founds Istituto di studi urbani e regionali (Institute of urban and regional studies), in frame of which he starts a study of urban geography of Milan. His contributions are remarkable in the theoretical field, together with a number of unrealised projects (both housing and mainly urban plans), while built works are scarce.

List of works

1922	Restructuration of hôtel Diana Majestic in viale Piave, Milan, Italy
1924-1925	Casa della Meridiana, Milan, Italy
1929-1930	Casa di via S. Calimero, Milan, Italy
1938	Villa Crespi, Vigevano, Italy

References and further reading

Burg, A. (1992) *Stadtarchitektur Mailand, 1920-1940 : die Bewegung des "Novecento Milanese" um Giovanni Muzio und Giuseppe de Finetti*, Basel : Birkhäuser Verlag.

http://www.treccani.it/enciclopedia/giuseppe-de-finetti_%28Dizionario_Biografico%29/

Visual material:



Fig. 73. Casa della Meridiana, architect Giuseppe de Finetti (1924-25), Photo: M. Bosternaru, 2010

11.4 Fränkel, Rudolf (1901-1974)

Photo at <http://kg.ikb.kit.edu/arch-exil/320.php> (small size)

The German-Jewish architect Rudolf Fränkel was the son of Louis Fränkel, a government architect who studied architecture at the Royal Technical College in Charlottenburg while receiving practical training from his father.

Soon after opening an office in Berlin in 1924 he worked on his first major commission, the Gartenstadt Atlantic, a Siedlung of the type garden city in an inner-city location (for which reason it was prize-awarded) now protected as monument and which underwent recently renovation (2005). One of the landmarks of the development was the Lichtburg cinema (an architecture of light), which no longer exists. Yet the Gartenstadt Atlantic is different from German Modernist architecture exactly through its way of adapting the garden city to the inner city: it has blocks and not the well known German "Zeile" (row), and the interiors are rather classical and do not display the innovation in the communication of spaces. Fränkel built some other residential buildings in the following years, which are not listed in this article. Fränkel was invited to join the Bauhaus, but declined. In 1933 with the rise to power of the Nazis, he emigrated to Bucharest, where he built first a property including his studio (Dr. Roth), a metal structure office building (Adriatica), some other family and collective housing as well as industrial buildings, and two spectacle buildings – the Comedy Theatre and the Scala Cinema. It is the corner of CA Rosetti street and Magheru boulevard which displays 3 Fränkel buildings: the Malaxa (together with Horia Creanga), the Scala cinema and another one, which has been recently reshaped by removing the interior and keeping only the facade. The multifamily housing developments in Bucharest prove to suit well Fränkel's style, as they are integrated in the context of innercity blocks. In the interwar time Bucharest displayed housing in the newly populated N-S boulevard in the city centre, instead of periphery like in (Western) Europe. Obviously he had no right to sign his own projects as the archive drawings show. The last buildings in Bucharest were raised 1936, and 1937 Fränkel moved to London, where he continued to design residential and industrial buildings. In 1950 Fränkel finally emigrated to the USA to teach at the Miami University in Oxford, Ohio. Here he started the first urban planning programme in America which he led until he was retired, not being tenured (as foreign national), and he was ac-

tive in developing Master Plans. Miami University staff Gerardo Brown-Manrique is the best informed researcher on his work, while some original drawings and period photographs are kept at the Canadian Centre for Architecture in Montreal, Canada. The University of Karlsruhe (TH) used to maintain a directory of German speaking architects in exile, reporting also on Fränkel's buildings and archiving of material. Recently an NGO based in Berlin dedicates time to German Jewish architects in exile. Fränkel through his career was a unique example of moving from Western Europe to Eastern Europe and can serve as role model for the EU today.

List of works

- | | |
|-----------|--|
| 1924–1928 | Gartenstadt Atlantic settlement, Gesundbrunnen, Berlin, Germany |
| 1927–1929 | Lichtburg cinema at Gartenstadt Atlantic, Gesundbrunnen, Berlin, Germany |
| 1933 | Dr. Roth Property (including Fraenkel studio), Bucharest, Romania |
| 1933 | Adriatica office building, Bucharest, Romania |
| 1934 | House Pop, Bucharest, Romania |
| 1934 | Velvet Textile Factory (demolished), Bucharest, Romania |
| 1934 | Block of flats Pop, Bucharest, Romania |
| 1935 | Comedy Theatre, Bucharest, Romania |
| 1935 | Vaida-Comşa House, Bucharest, Romania |
| 1935/6 | Scala Cinema, Bucharest, Romania |
| 1935 | Building Malaxa (with Horia Creanga), Bucharest, Romania |
| 1936 | Villa Flavian, Bucharest, Romania |
| 1936 | Property Magheru 1-3 (altered), Romania |
| 1937–1938 | Frankel house, Outer London, UK |
| 1946–1947 | Suflex Ltd. Factory, UK |

References and further reading

Brown-Manrique, G. (2009) *Rudolf Fränkel and Neues Bauen: Works in Germany, Romania and the United Kingdom*. Tübingen: Wasmuth. ISBN 978-3-8030-0695-0

Zohlen, G. (ed.) (2006) *Rudolf Fränkel, die Gartenstadt Atlantic und Berlin*, Niggli

<http://kg.ikb.kit.edu/arch-exil/320.php>

<http://svrdam.cca.qc.ca/search/bs.aspx?langID=1#s=rudolf%20fr%C3%A4nkel&p=1&a=k&nr=1&nq=1>

Visual material:



Fig. 74. Gartenstadt Atlantic, Photo: M. Bostenaru 2012

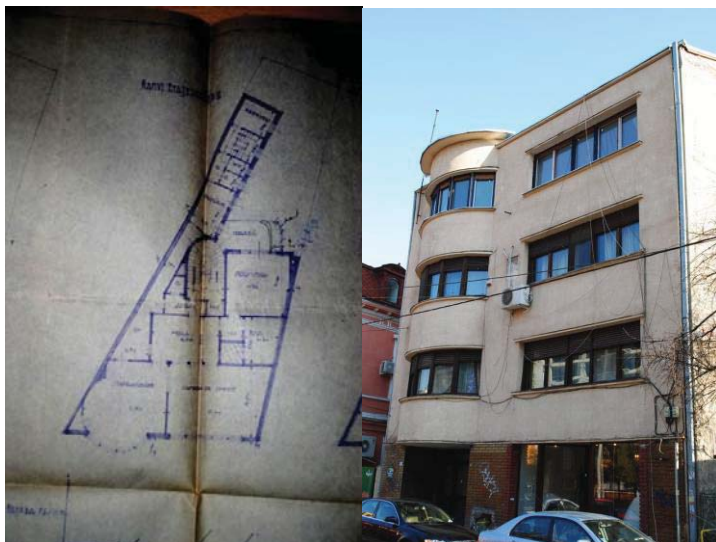


Fig. 75. Dr. Roth block of flats (including the flato f Fränkel) 1933. Archive plan from the Town hall of Bucharest (PMB fond tehnic). Photo: M. Bostenaru 2011



Fig. 76. Adriatica building. Photo: M. Bostenaru, 2011. Plan: Town hall of Bucharest archives (PMB fond tehnic).

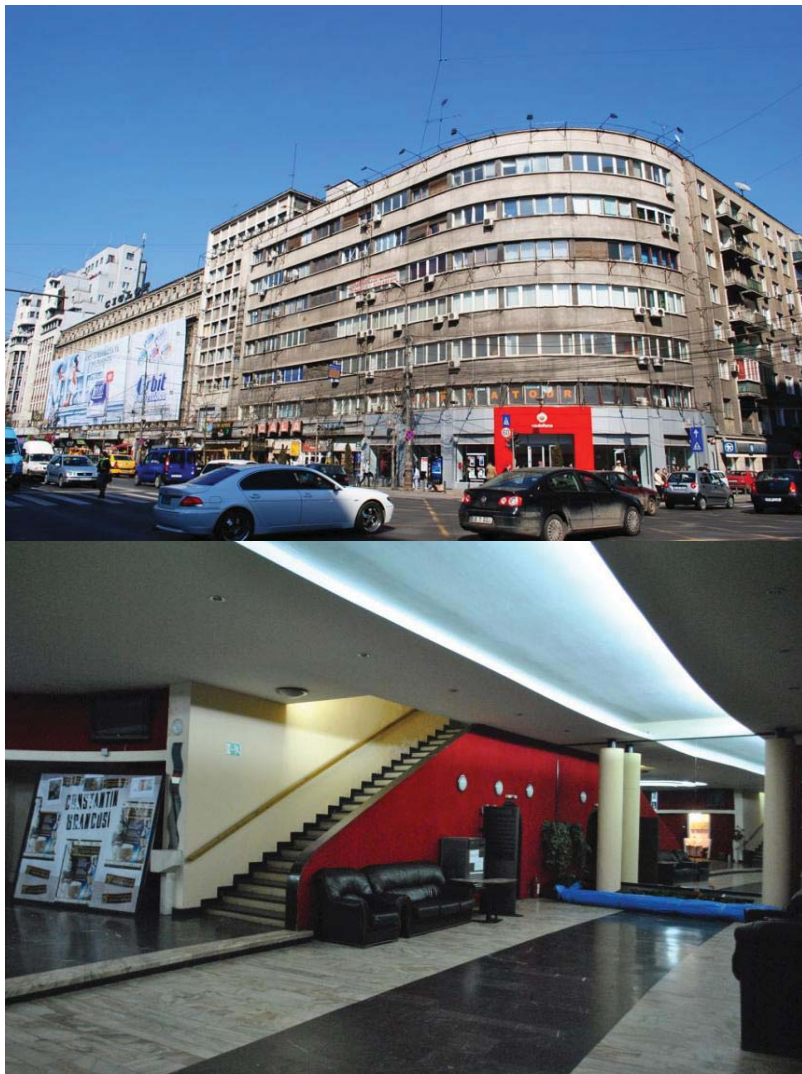


Fig. 77. Scala cinema. Photo: M. Bostenaru, 2011 and 2013

11.5 Ponti, Gio (1891-1979)

No free portrait, Wikipedia links to this one http://en.wikipedia.org/wiki/File:Gi%C3%B2_Ponti.png

The Italian architect, designer and publisher Gio Ponti studied architecture at Politecnico di Milano, from where he graduated 1921, after having also served in the First World War. 1923-27 he partnered with Novecento architects Mino Fiocchi and Emilio Lancia and then till 1933 with Emilio Lancia only, a time from which date some emblematic Novecento Milanese buildings. The Novecento Movement was the counterpoint of the Rationalism of Gruppo 7 (around Giuseppe Terragni). It's architecture marked two periods, both started by Giovanni Muzio, one of decorative Novecento and one of geometric Novecento. Both leaned to the typical Milan palazzo, and were a sort of classic revival. However, as early as 1934 he built a Rationalist building in the Città universitaria in Rome (the Mathematics building). After Lancia he partnered with engineers, and, in 1950, won the commission for the Pirelli tower in Milan (1955-58) for which he partnered with no less than Pier Luigi Nervi. The 52 storeys (127m) high tower is the highest one in reinforced concrete in the world. The curtain wall is hold by a central structure. It is then when he truly turned towards Modernism. The tower attracted international attention and commissions from other continents (Venezuela, Hong Kong, USA) came. But he built abroad before, in the interwar time he built Casa Tataru in Cluj-Napoca, Romania, which retains the original furniture. One masterpiece which was built after this was the 1971 Denver Art Museum. The museum was extended twice since, and a new extension is the Hamilton pavilion by Daniel Libeskind. When comparing the original museum with the extension the adequacy for exhibition space lets Ponti's design be the winner (Taisto Mäkelä). He continued to work for Milan as well, with a series of churches.

As industrial designer, Gio Ponti did furniture, glass and ceramicsware, including lamps from the beginnings of 1923 on, when he participated at the Bienalle in Monza. He also did scenographic arrangements. In 1928 he founded the today successful Domus magazine, the show-off magazine in architecture and arts of Italy, which he led as editor with intermittences. He was professor of his Alma Mater, the Polytechnic of Milan (1936-1961).

Gio Ponti's work was praised by a number of awards: "Commander" of the Royal Order of Vasa in Stockholm, Accademia d'Italia Art Prize, gold medal from the Paris Académie d'Architecture and hold o honorary doctorate from London Royal College of Art.

List of works

- 1925 House in Via Randaccio, Milano, Italy
- 1927 Monumento ai Caduti (Monument of the Fallen) in Piazza Sant'Ambrogio, Milano, Italy
- 1928 House in Via Domenichino, Milano, Italy
- 1931 Typical houses: Domus Julia, Domus Carola and Domus Fausta in Via De Togni, Milano, Italy
- 1933 House Rasini, Porta Venezia, Milano; Italy
- 1933 Torre Littoria, Parco Sempione, Milano, Italy
- 1934 Math School, Città Universitaria, Roma, Italy
- 1935-1938 First Palazzo Montecatini, Milano; Italy
- 1938 Villa Tataru, Cluj-Napoca, Romania
- 1939 Palazzo Ferrania (then Fiat), Milano, Italy
- 1947-1951 Second Palazzo Montecatini, Milano, Italy
- 1952-1958 Istituto Italiano di Cultura (Fondazione Leric), Stockholm, Sweden
- 1953-1957 Villa Planchart, Caracas, Venezuela.
- 1956-1961 Pirelli skyscraper, Milano, Italy
- 1955-1960 Church San Luca, Milano, Italy
- 1970 Cathedral Gran Madre di Dio, Taranto
- 1970-1971 Denver Art Museum, Denver, USA.

References and further reading

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 Taisto Mäkelä, Denver professor for history of architecture
http://z10.cgpublisher.com/proposals/146/index_html
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Visual material:



Fig. 78. Casa Tătaru, Cluj-Napoca (1938). Arch. Gio Ponti. Photo: M. Bostenaru, 2012. Visit by permission of the owner.

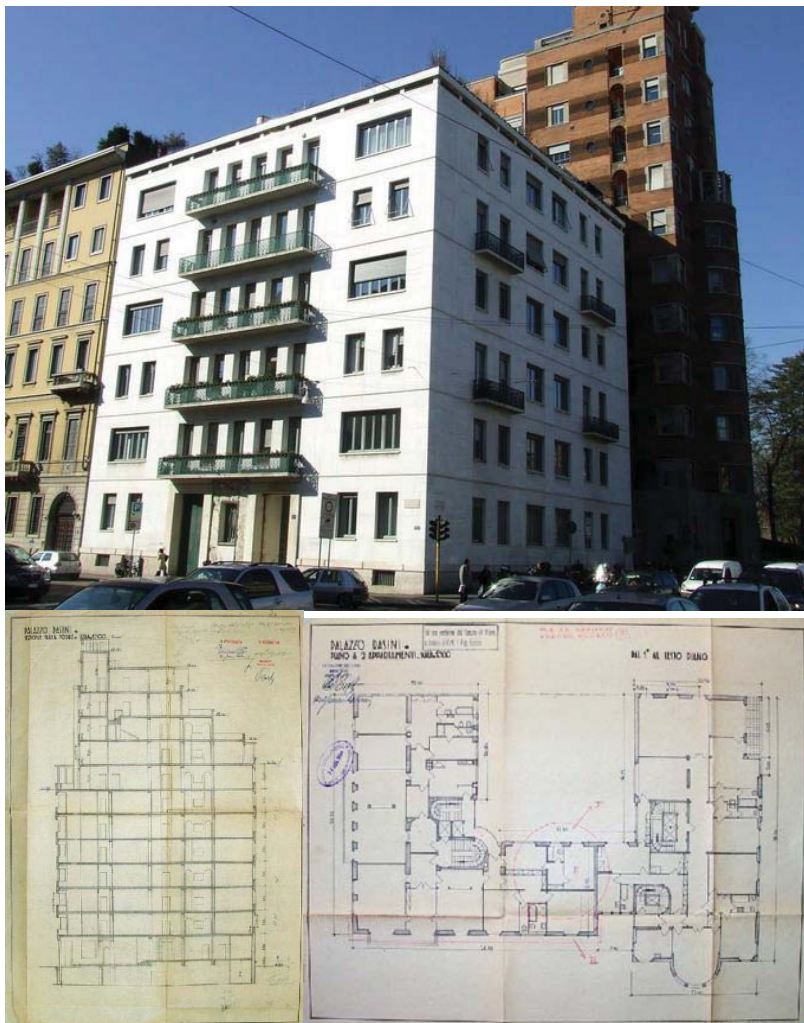


Fig. 79. Plan at Novecento buildings in Milan (ACM - Archivio Civico Milano, reproduced by permission), monument listed in Lombardia. SIVEM arch. Emilio Lancia and Gio Ponti Palazzo (1933-34) Porta Venezia and Casa Torre Rasini arch. Emilio Lancia and Gio Ponti (1933-34) Porta Venezia. Photo: M. Bostenaru, 2007.

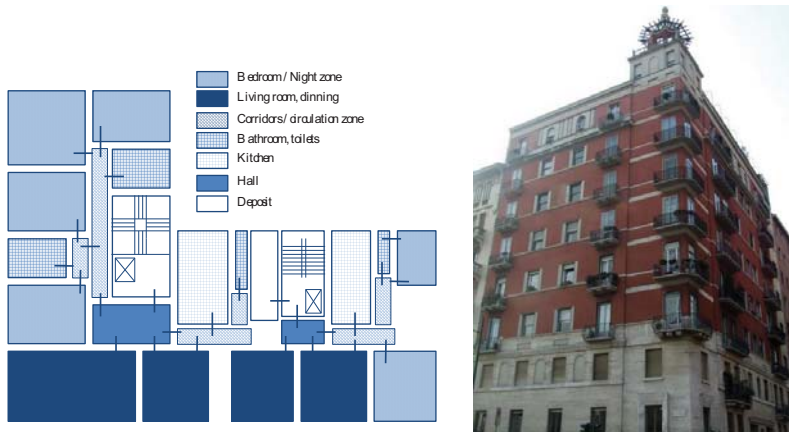


Fig. 80. Ideal zonification at Novecento apartments in Milano. Block of flats in Via Domenichino, arch. Emilio Lancia and Gio Ponti. Photo: M. Bostenaru 2007, Bostenaru (2011).

For Pirelli skyscraper see

http://it.wikipedia.org/wiki/File:Grattacielo_Pirelli3.jpg

(Creative Commons)

For Denver art museum see

http://en.wikipedia.org/wiki/File:DAM_-_1971_Bldg.jpg

(Creative Commons)

11.6 Cantacuzino, George Matei (1899-1960)

Photo at the Faculty of Architecture in Iasi which bears his name
http://www.arhitectura.tuiasi.ro/?page_id=703&lang=en

The Romanian architect and writer George Matei (GM) Cantacuzino was born in Vienna with a diplomat father and a mother descending from the Romanian ruling family. After childhood in Vienna and school years in Switzerland (with vacations in Romania), and war years, he is admitted to study in Paris in 1920, when he also starts working on the restoration of Mogoșoaia palace. The decision for France comes on the background of Romanian francophonie, while the decision to study architecture comes on the family background of seeing the beginning of works at Mogoșoaia palace (under the Venetian architect Domenico Rupolo, who might connect the idea of loggias to those of Ca d'Oro in Venice). Mogoșoaia palace is one in the vicinity of Bucharest, built in Brâncovenesc style, by voivod Constantin Brâncoveanu. Afterwards he founds an office with August Schmiedigen, whom he met on the Mogoșoaia building site, with whom he builds in Palladian style (urban palace of the Chrissoveloni bank). According to Teodorovici this also reflects his childhood memories of Viennese architecture. Actually he writes a study on the work of Andrea Palladio in 1928. In 1929 he graduates and moves back to Romania. In 1930, with opening of an own office with three collaborators, he turns towards functionalist architecture with the resort buildings at the Black Sea. In the field of functionalist architecture he collaborated with another big name of Romanian functionalist architecture, Octav Doicescu, in the industrial buildings of IAR and at the exhibition pavilion in New York (where the later remained). Another functionalist buildings are the blocks of flats in the centre of Bucharest and another hotel on the seaside designed together with Vasile Arion. A block of flats planned only by him in functionalist manner on Magheru boulevard is the Carlton block of flats, which collapsed in the 1940 earthquake. It is the only building from interwar time to collapse in this earthquake, but a precursor of the numerous collapses of interwar buildings in the 1977 earthquake due to their conformation with accentuated corner buildings. The collapse suscitated an active discussion about its cause, misused by the legionary dictatorship. However, also the interwar years are marked by in parallel designing in Renaissance style and in Brancovenesc style (villas, and a markant building at Piața Universității, the Industrial Credit Company building). An interesting approach is the corpus near Crețulescu church, and

stay back from the big architecture gesture to put in value the church (which was in line for his history preoccupations for churches). The architecture, although Palladian, has thus the simplicity and lack of ornament of functionalism. It is an urban planning approach. The co-existence of these three directions (Renaissance/Palladian, New-Romanian/Brâncovenesc and Functionalist) led to place his architecture between tradition and Modernism. The classical approach, result of his travel studies, was as much part of his attitude as functionalism. In parallel with building activity he also did publication work: architecture history, theory and criticism. Notable are his issues of *Simetria*. Apart of architecture designing and writing he did architecture drawings with which he opened several exhibitions in interwar but also in postwar time. He does a number of architecture travels, incl. in the Orient. The taste for travel came during study years, when he travelled between Bucharest and Paris to see whole Europe. He works also on the urban plan of Bucharest of 1934 along with other big names of interwar architecture. After the war he built one more major building in the centre, and restored a manor (return to Palladio) before being forced by the communist regime to resign from designing. 1948 he is imprisoned for being a prince, till 1953. He worked 1953-1956 at the Monument Protection Office cataloguing church heritage before being obliged to resign also from there and moved to the places of his childhood in Northern Moldavia, where he restored monuments, a direction his career took also in better years. Notable is the building of pavilions for the Mitropoly, which was done under false name.

List of works (selection):

- 1920-1930 Restoration of the Mogoșoaia palace; Mogoșoaia, Romania
- 1923-1928 The Chrissoveloni Bank Palace, Bucharest, Romania (with August Schmiedigen)
- 1925 Housing for the employees of Chrissoveloni Bank, Bucharest, Romania (with August Schmiedigen)
- 1925-1928 Restoration and extension of the former Palace of Queen Elisabeth of Greece, Bucharest, Romania (with August Schmiedigen)
- 1930-1933 Villa complex on the Black Sea coast, Eforie Nord, Romania (incl. Villa Aviana 1933, Villa George Bibescu, 1930-31, Villa Crinul 1933 and many other Egreta, Anemona, Flora, type villas etc.)
- 1930-1934 Hotel Bellona, Eforie Nord, Romania

- 1930-1933 Industrial complex of the aircraft factory IAR (later Tractorul) – assembly hall (collaboration with Octav Doicescu), Braşov, Romania
- 1932 Block Carlton, Bucharest, Romania (collapsed in the 1940 earthquake)
- 1930-1933 Villa N. Mavrocordat, Bucharest, Romania
- 1932 Tudor Arghezi residence, Bucharest, Romania
- 1934 Collaboration at the Master Plan of Bucharest, Romania
- 1934-1935 Office building of the former Industrial Credit Company, Bucharest, Romania
- 1934-1935 Block of flats Emanoil Kretzulescu, Bucharest, Romania (with Vasile Arion)
- 1934-1935 Block of flats D.D. Bragadiru, Bucharest, Romania (with Vasile Arion) (next to Horia Creangă Barbu Dimitrescu building with the office of the architect)
- 1934-1935 Villa Florica Policrat, Bucharest, Romania
- 1936 Villa Nae Ionescu, Bucharest, Romania
- 1936-1940 Hotel Rex, Mamaia, Romania (with Vasile Arion)
- 1938 Octavian Goga Mausoleum, Ciucea, Cluj county, Romania
- 1938 Corpus of the Kretzulescu Church Wardenship, Bucharest, Romania
- 1938-1940 Church Adormirea Maicii Domnului, Flămânda, Argeş county, Romania
- 1939 Romanian pavilion at the World exhibition in New York, USA (with Octav Doicescu)
- 1938-1940 Restoration of the Drugănescu Manor, Drugăneşti-Stoeneşti, Giurgiu county, Romania
- 1945-1948 Gas and Electric Company Building, Bucharest, Romania
- 1957-1960 Restoration of the Mitropolia, Iaşi, Romania
- Restoration of monuments in Northern Moldavia (incl. Biserica Trei Ierarhi, Iaşi), Romania

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Stuttgart, http://elib.uni-stuttgart.de/opus/volltexte/2010/5813/pdf/teodorovici_dissertation_2010_16_mb.pdf

Visual material:



Fig. 81. Block of flats D.D. Bragadiru (1934-35), Photo: M. Bostenaru, 2014



Fig. 82. Block of flats Emanoil Kretzulescu (1934-35), Photo: M. Bostenaru, 2014



Fig. 83. Corpus of the Kretzulescu Church Wardship (1938), Photo: M. Bostenaru, 2014



Fig. 84. Office building of the former Industrial Credit Company (1934-35), Photo: M. Bostenaru, 2014



Fig. 85. Gas and Electric Company Building (1945-48), Photo: M. Bostenaru, 2014

11.7 Delavrancea-Gibory, Henrieta (1894-1987)

Photo (small size) at <http://arhitectura-1906.ro/2011/07/henrieta-delavrancea-gibory-1894-1987/>

The Romanian pioneer woman architect Henrieta Delavrancea-Gibory was the fourth daughter of the writer Delavrancea, born in a family of artists, her older sister Cella being a renowned musician (piano). She started studying architecture in 1915, and graduated in 1927, after an interruption of eight years of the studies (till 1924) due to service in the infirmary during the war as well as marriage (1919) with an officer from the mission of the French general Berthelot. Soon after graduation she wins the project competition for the district hall (prefectura) in Oravita, in New-Romanian style. At the time of her graduation the New-Romanian style still existed in Romania, but there were also French influences of Modernism, since the Romanian Modernist architecture was mostly marked by this, with the blocks with recesses in the spirit of Auguste Perret and Henry Sauvage. Henrietta Delavrancea started an architecture which combined the spirit of the place with Modernism. Although Bucharest features a number of her buildings, including residential, but also sanitary buildings (with one competition of this kind she won against the team of renowned architect Horia Creanga, but the building, one of her first designs, was finished only 1942), her main field remains resort architecture. She constructed on the Romanian (in Eforie), but mainly on the Bulgarian seaside (from 1934 on, the first one, the villa Vanturile, valurile [Winds and ondes], being demolished in 2009). The 17 villas in Balchik, then Romania, today Bulgaria, are the peak of her architecture, which she achieved at the age of over 40 years. They include a villa in the garden of the Royal Palace of Queen Maria, hence pioneer woman architect and pioneer investor. As an architecture, they combine stone with modern materials painted in white, for which reason her works are cited for combining traditional and modern. Also 2009 was demolished one of her modernist villas in Bucharest, the villa Prager. The villa Prager in Bucharest was the only one there reminding the architecture of the villas in Balchik. After the war, she further designed, remarkable for this time being the hospital buildings (Fundeni), and then in collective work in design institutes. She also worked in history of architecture research, doing studies for the restoration of churches, and promoted her fellow women architect colleagues from the pioneer time. Records of her memories were published in the magazine *Arhitectura*, and her main monograph on the topic remained

unfinished. In 1972 she received the prize of the Romanian Union of Architects for her whole activity. Starting 1977, over 80 years old, when the earthquake triggered an excuse for demolishing buildings for the Communist power, she was involved in efforts to save monuments of Bucharest, but without result.

List of works

- | | |
|---------|--|
| 1925-26 | Own house, Eminescu str., Bucharest, Romania |
| 1927 | House Iosipovici, Bucharest, Romania |
| 1928 | House Blanche Bernay, Bucharest, Romania |
| 1930-33 | Medicine Institute "dr. N. Lupu" (now in ruin), Bucharest, Romania |
| 1932-39 | Institute of Public Health and Hygiene, Bucharest, Romania |
| 1932-34 | Villa "Vanturile, valurile", Balchik, Bulgaria |
| 1934 | House Prof. Gavrilă, Bucharest, Romania |
| 1934 | Villa "Turnul lui Mugur" (Mugur's tower), Balchik, Bulgaria |
| 1934 | Casa Balcica, Balchik, Bulgaria |
| 1934-35 | Vila "Lupoaiței", Balchik, Bulgaria |
| 1934-35 | Villa poet Ion Pillat, Balchik, Bulgaria |
| 1935 | Villa Eliza Brătianu, Balchik, Bulgaria |
| 1935 | Tea pavilion of Queen Maria, Balchik, Bulgaria |
| 1935 | Tobacco debit, Balchik, Bulgaria |
| 1935 | Fruit shop, Balchik, Bulgaria |
| 1935 | Villa "Cuibul lui Roman", Balchik, Bulgaria |
| 1935 | House M. Serbescu, Bucharest, Romania |
| 1936 | Town hall, Balchik, Bulgaria |
| 1936 | Pavilionul Granicerilor (Frontier keepers pavilion), Castle, Balchik, Bulgaria |
| 1936 | Villa Grigore Iunian, Balchik, Bulgaria |
| 1936 | Villa Misterioasa, Balchik, Bulgaria |
| 1936 | Villa ing. Prager, Bucharest, Romania |
| 1936 | Villa "Ghiul Hane", Balchik, Bulgaria |
| 1936 | Villa "Ghiul Serai", Balchik, Bulgaria |
| 1936 | Villa Mircea Cancicov, Balchik, Bulgaria |
| 1936-37 | Villa prof. Vilcovici, Bucharest, Romania |
| 1936 | Villa "Casa cu terase in mare" (House with terraces in the sea), Balchik, Bulgaria |
| 1937 | Villa Cantuniari, Bucharest, Romania |

- 1937-38 Block of flats general Glatz, Bucharest, Romania
 1938 Facade of the cinema Capitol, Bucharest, Romania
 1936-37 Snagov palace of Prince Nicolae (modified 1970),
 Snagov, Romania
 1938-39 Block Grig Arapu, Bucharest, Romania
 1946-48 Block of flats Brezoianu str., Bucharest, Romania
 1949-59 Fundeni hospital, Bucharest, Romania
 1950-60 Oncology Institute, Filantropia hospital, Bucharest, Ro-
 mania
 1982-87 Contribution to the restoration of the church of Sf. Gheor-
 ghe, Bucharest, Romania

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 charest: Simetria.

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Retegan, E., Doctorate thesis, "Ion Mincu" University of Architecture
 and Urbanism (in work)

Visual material:



Fig. 86. Villa Ion Pilat, Balchik (1934-35), Photo: M. Bostenaru, 2010



Fig. 87. Vila Ghiul Serai, Balchik (1936), Photo: M. Bostenaru, 2010

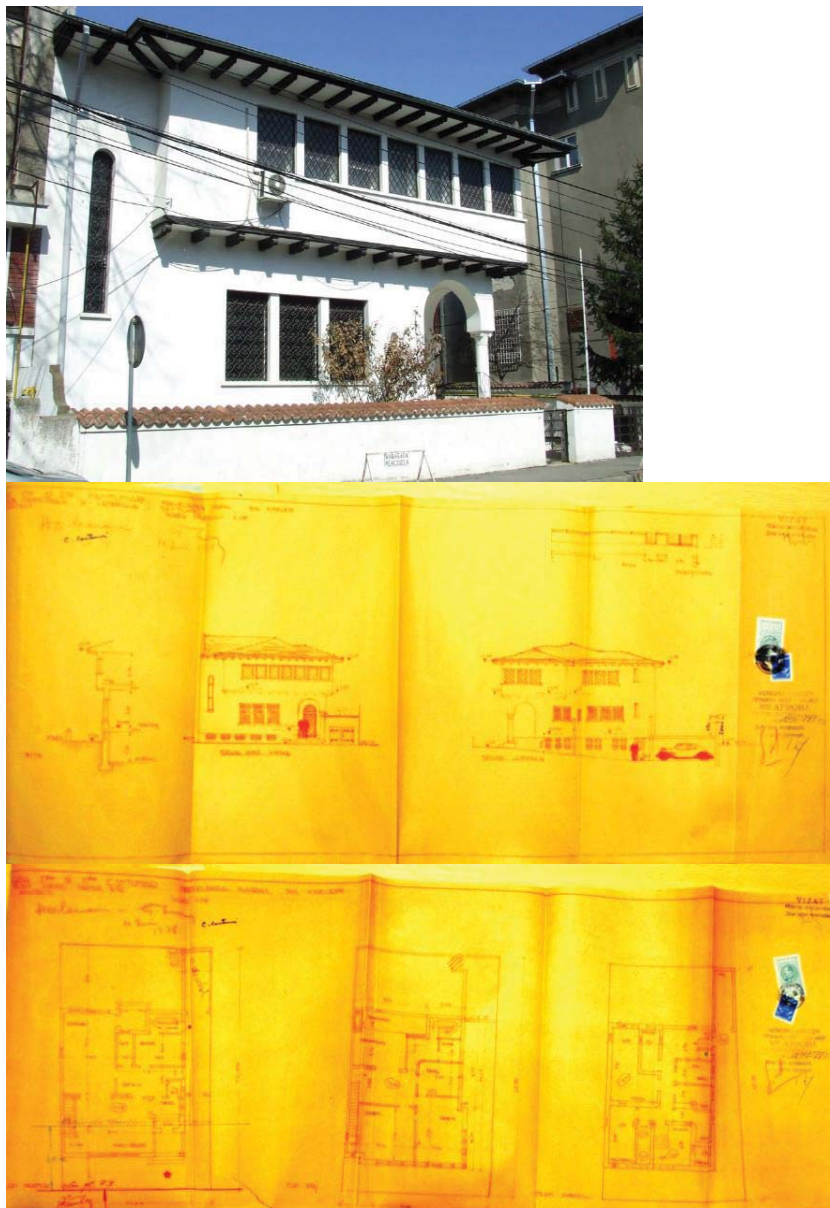


Fig. 88. House Cantuniari, Bucharest, Romania (1937), Photo: M. Bostenaru, 2010. Plans from the Bucharest city archives.



Fig. 89. Pavillion at the Queen castle, Balchik (1936), Photo: M. Bostenaru, 2010.



Fig. 90. Nicolae Lupu medicine institute (1930-33), Photo: M. Bostenaru, 2011.



Fig. 91. Block of flats on Brezoianu street (1946-48), Photo: M. Bostenaru, 2010.



Fig. 92. Villa Prager (1936, demolished 2009), Photo: M. Bostenaru, 2009

11.8 Creangă, Horia (1892-1943)

Portrait by Marcel Janco
<http://andreidoicescu.blogspot.ro/2011/01/larchitecte-horia-creanga-vu-par-marcel.html>

The Romanian architect Horia Creangă was the grandson of great Romanian writer Ion Creanga. He started studying at the Bucharest Architecture School before moving to graduate in Paris in 1916. He returned to Romania in 1926 with his wife Lucia, born Dumbraveanu, also architect. 1929 was his breakthrough, with the win of the competition, in collaboration with his brother, Ion, and his wife, for the ARO building (Romanian Assurance), which is considered the manifesto of Modernist architecture in Romania. Further collaborations shaped his career, opening 1935 an office with young architect Haralamb Georgescu, who later made an important career in the USA, and with Nicolae Nedelescu. He designed industrial and residential buildings for ARO (in blocks in Bucharest and a hotel in Braşov), for Malaxa industries (both industrial and residential) and for the Bucharest City Hall. The Malaxa industries building (later FAUR, a while 23rd of August) is one of the most notable ones, which drew attention in encyclopedies of modern architecture.

Characteristic for the work of Creangă in highrise housing and office building are: the horizontal window bands with background columns, which alternate with foreground profiles of the parapets, the side recesses, the recessed upper floors, and the facade layers in different depths. 1929 still marked connections to Haussmannian style, having built a building with bow-windows (Pop and Gheorghiu building). Although the horizontal became characteristic for his chef d'oeuvre, the late years, when a totalitarian regime came to power in Romania, marked a return to the vertical accents of this, as we see in the ARO building on Calea Victoriei, which features vertical bands. Apart of high-rise housing Creangă built also low-rise housing, either for the privileged (villas) from which the best known is the Bunescu villa, or even what is so rare in Romanian architecture but common for Modernism, cheap housing. Several coupled houses by him are part of the complex of Vatra Luminoasă, in what became today also a central part of Bucharest. Close to them is the school building he designed.

The Ottulescu building (1934-35) builds a notable highlight: “the most modern and interesting approach in the whole Romanian interwar architecture” (Machedon and Soffham, 1999). It is an example of a free plan in a

collective apartment block, not in the sense of the flexibility of spaces, but in the disposition of the apartments across the floors. The structural grid is not completely regulated and neutral, as one would expect for a perfect “free plan” example (see the Le Savoye villa by Le Corbusier), but, even if simple and clear, dictated by the spatial order of the 1st and 2nd floor. A two story duplex on ground floor and mezzanine, recessed from the street, takes advantage of the reinforced concrete structure.

Although the ARO building resisted remarkably well to the 1977 earthquake, due to the renovation recently before of the cinema in the lower floors, some buildings by Creangă such as Barbu Dimitrescu are listed Risk category I and need retrofit. Not only seismic retrofit endangers potentially the look of the buildings, but also thermal isolation. For example in the Malaxa-Burileanu building, for which he cooperated with Rudolf Fränkel, the original steel profiles of windows are being gradually replaced with plastic „termopan“.

Apart of industrial and residential building is remarkable his involvement in temporary architecture in frame of the Herăstrău park, a park along the belt of lakes of Colentina, and the furnishing of which was characteristic for the interwar time. The approach continues what has been started 1906 with an exhibition in the Carol Park. Exhibition architecture was more common for other European countries (Mostra d’Oltremare in Italy) and is unique through this in the Romanian one.

List of works

1929	Pop and Gheorghiu block, Bucharest, Romania
1929	ARO building, Bucharest, Romania
1930-1931	Malaxa factory, Bucharest, Romania
1932	Bunescu villa, Bucharest, Romania
1932	Davidoglu building, Bucharest, Romania
1933	Barbu Dimitrescu building, Bucharest, Romania
1933-1939	ONEF Stadium (disappeared), Bucharest, Romania
1934	Cinema for the ARO building, Bucharest, Romania
1934	Elisabeta Cantacuzino villa, Bucharest, Romania
1934-35	Elena Ottulescu building, Bucharest, Romania
1935-35	Nedioglu building, Bucharest, Romania
1935	Cristea Mateescu villa, Bucharest, Romania
1935-36	Malaxa factories – extension, Bucharest, Romania
1935-37	Burileanu-Malaxa building, Bucharest, Romania
1936	Malaxa factory, administration pavilion, Bucharest, Romania

- 1936-37 ARO Palace, Calea Victoriei, Bucharest, Romania
- 1937 Veturia Goga villa, Bucharest, Romania
- 1937-39 Cultural Palace, Cernăuți, Ukraine
- 1937-1942 Central market hall Obor – Bucharest
- 1937 Cheap housing, part of Vatra Luminoasă, Bucharest, Romania
- 1937 School building, Maior Coravu, Bucharest, Romania
- 1937-38 Hotel Aro, Braşov, Romania
- 1938-1940 Exhibition “Luna Bucureştilor” (the month of Bucharest) – transforming some pavilions by Octav Doicescu and new pavilions (today disappeared), Bucharest, Romania
- 1939 Pavillions of the exhibition “Munca și Voe buna” (Work and Joy), Herăstrău park, Bucharest, Romania
- 1940 Nedioglu villa, Breaza, Romania
- 1942 Milk factory, Alba Iulia, Romania
- 1942 Milk factory, Burdujeni, Romania
- 1942 Milk factory, Simeria, Romania
- 1942 Transformation of the amphitheatre of the Central School for Girls (by Ion Mincu) into what today is the Toma Caragiu hall of Bulandra Theatre, Bucharest, Romania

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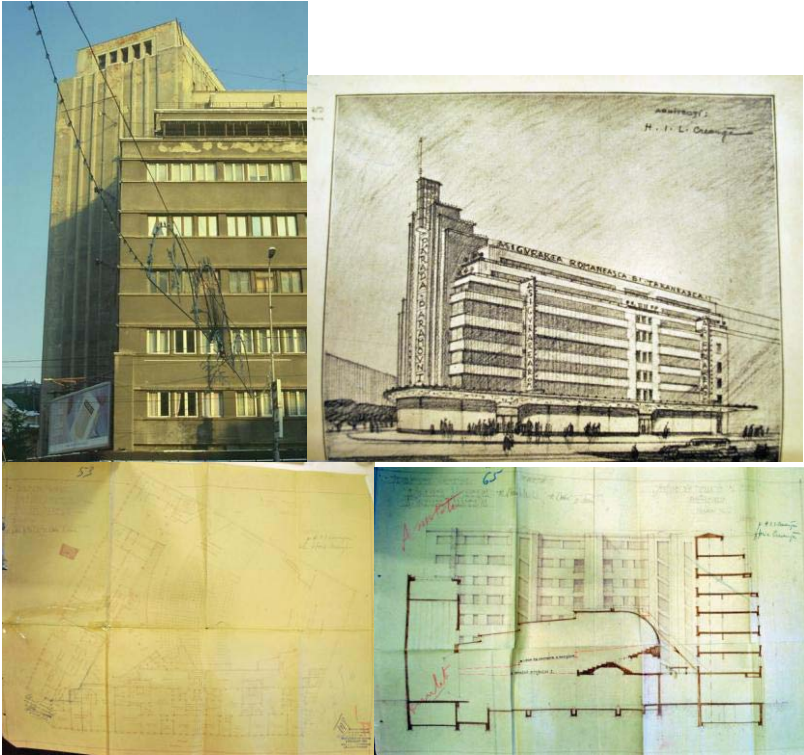


Fig. 93. Aro (today Patria) building (1929) – the manifesto of Modern in Bucharest, Photo: M. Bostenaru, 2002 http://photo.net/photodb/photo?photo_id=17688155&size=lg. Archive images from the Town hall archives of Bucharest (PMB fond tehnic)

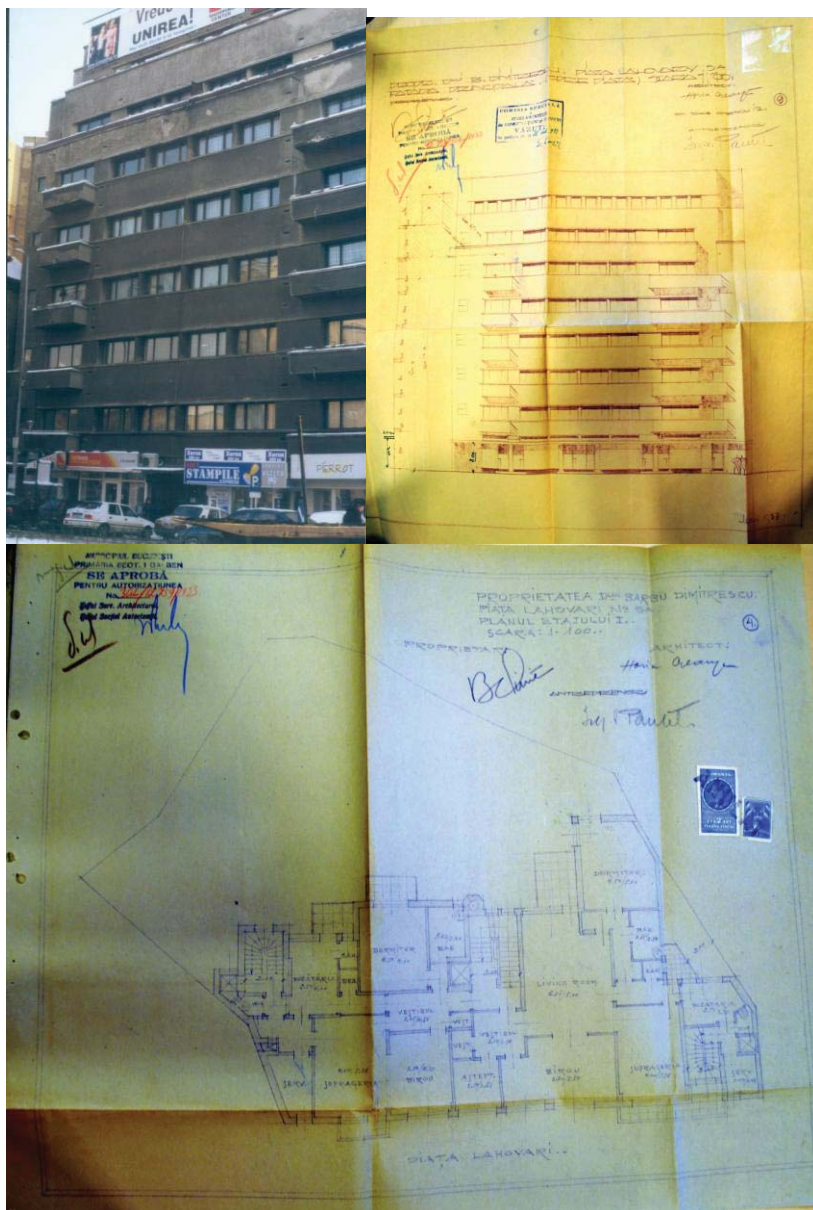


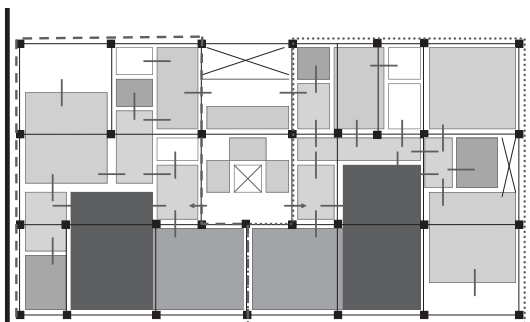
Fig. 94. Barbu Dimitrescu building (1933), Photo: M. Bostenaru, 2002. Archive images: Town hall archive of the city of Bucharest (PMB fond tehnic)



Fig. 95. Burileanu-Malaxa building (with Rudolf Fränkel) (1935-37), Photo: M. Bostenaru, 2011



Fig. 96. ARO Palace, Calea Victoriei (1936-37), Photo: M. Bostenaru, 2002



Legend:







	<i>Bedroom / night zone</i>
	<i>Living room, including dining</i>
	<i>Corridors / circulation zone</i>
	<i>Bathrooms, toilets</i>
	<i>Kitchen</i>
	<i>Hall / vertical circulation</i>
	<i>Deposit / external circulation</i>



Fig. 97. Functional plan and photo of the Elena Ottulescu building (1934-35), After M. Bostenaru (2009)

11.9 Janco (Iancu), Marcel (1895-1984)

Photo at

http://ro.wikipedia.org/wiki/Marcel_Iancu#mediaviewer/Fi%C8%99ier:Marcel_Iancu.jpg

The Romanian architect, theorist and painter Marcel Iancu (spelled abroad Janco) studied at the ETH in Zürich (1915-17). In Zürich he met again his lyceum colleague Tristan Tzara and together with him and Hans Arp founds the Dadaist movement. 1922 Janco returns to Romania, where he re-meets his other lyceum colleague with whom he worked before, Ion Vinea, and joins his circle in the journal “Contimporanul”. It is through this circles that he participates to the Avantgarde movement (notable names, among them Kassák, were published in Contimporanul when less known), and also publishes a manifesto for a modern capital. Along with his architecture activity he has painting exhibitions. 1941 when Bucharest became dangerous for those of Jewish origin he emigrated to Palestina, where he continued to paint. Interest for Romania’s Modernist heritage raised with the Horia Creanga centenary (1992) and the Marcel Iancu centenary (1995) and is continued since.

Marcel Janco’s architecture buildings are residential, small scale, either family houses or middle rise blocks of small flats, similar size to the Modernism in Athens. The buildings are places either in South-Eastern central Bucharest or in the villa quarter in the North. With some exceptions, like in the West of the centre, built shortly before emigration (Naum Ghica building) or the first white box building in Romania and his breakthrough, the Villa Jean Fuchs. The influence from his painting is visible in them, in the play with different layers in the facade (ex. Paul Iluta building), as on a canvas. Recently Augustin Ioan published a study on the morphology of the architectural alphabet of Marcel Ianco, explaining the play with separation elements and volumes to achieve different spaces. The association e-card, when issuing the urban route map, also did a film on the Solly Gold building. Marcel Iancu’s buildings promoted the functionalist version of Constructivism or Cubism (Sandqvist). Some of the buildings were recently renovated, such as the Clara Iancu building (to its disadvantage) and the Jean Juster villa. The latter was damaged in the 1977 earthquake loosing part of the cantilevered roof which gave a lot to its appearance. Some other are listed category I risk to earthquakes and should undergo strengthening (Naum Ghica building, building on Luchian street).

List of works

1926	Block Herman Iancu
1927	Villa Jean Fuchs
1928	Villa Maria Lambru
1929	House Poldi Chapier
1930	Villa Florica Chihaescu
1931	Villa Paul Wexler
1931	Villa Jean Juster
1931	Block Clara Iancu
1931–1935	Villa Paul Iluta and laboratory
1933	Block Jacques Costin
1934	Block Solly Gold
1935	Block Bazaltin
1935	Block Frida Cohen
1935	Block Poldi Chapier
1935	Block on Luchian street
1935	Block Alexandrescu
1936	Villa Florica Reich
1937	Villa Hermina Hassner
1937	Villa Emil Patrascu
1938	Block Naum Ghica

References and further reading

- “Contimporanul” digital archive
<http://dspace.bcucluj.ro/handle/123456789/13576>
 Marcel Iancu urban route http://www.e-cart.ro/asociatia/ro/noutati/Traseu_urban_M.Iancu.pdf
 Ioan, A. (2012) Marcel Iancu si alfabetul sau formal, *Arhitectura* 3/2012
<http://arhitectura-1906.ro/2012/07/marcel-iancu-si-alfabetul-sau-formal-un-exercitiu-didactic-in-derulare-i/>
 UAR (1996) Centenar Marcel Iancu / Marcel Iancu Centenary (1895-1995), Bucharest: Simetria
 20th century architecture in Romania featured on the UIA webpage
<http://www.archi.fr/UIA/rechercheSimple.php?langue=en&objet=pays&numero%5B%5D=26>

Visual material:



Fig. 98. Solly Gold building (1934), Photo: M. Bostenaru, 2002
http://photo.net/photodb/photo?photo_id=12330240



Fig. 99. Paul Iluta building and laboratory (1931-35), Photo: M. Bostenaru, 2002
http://photo.net/photodb/photo?photo_id=12330244



Fig. 100. Naum Ghica building (1938) Schema of the building site organisation for the Naum Ghica building (1938), after Bostenaru (2006), Photo: M. Bostenaru, 2002



Fig. 101. Clara Iancu building (for his second wife), before restoration (1931), Photo: M. Bostenaru, 2002 http://photo.net/photodb/photo?photo_id=12294807



Fig. 102. Jean Juster villa (1931), Photo: M. Bostenaru, 2002

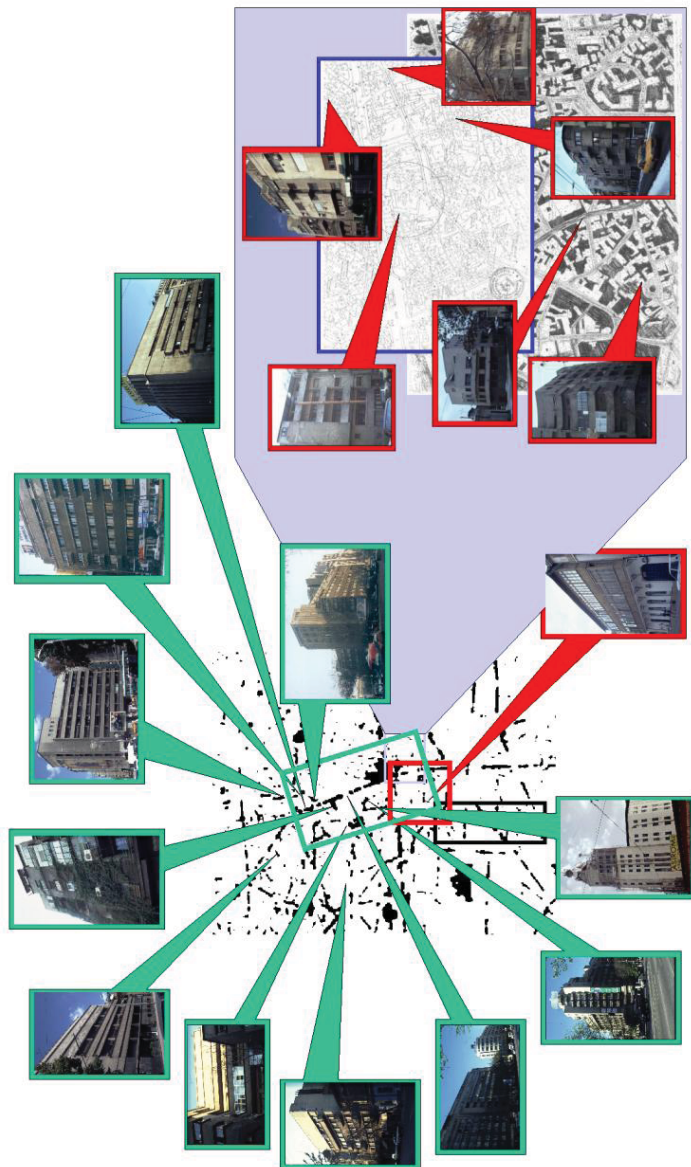


Fig. 103. Marcel Iancu buildings (marked with red) in the context of Modernist buildings in the centre of Bucharest, After Bostenaru (2006)

11.10 Muzio, Giovanni (1893-1982)

Photo at <http://www.arte.it/artista/giovanni-muzio-99>

The Italian architect Giovanni Muzio was the son of a practicing architect. After service in the First World War, he opened an office with Giuseppe De Finetti, Giò Ponti, Emilio Lancia e Mino Fiocchi in 1920. In 1922 he built what was the best known example of the Novecento movement, a classicizing movement in rivalry with the Italian Rationalism: the Ca' Brutta (Ugly house). The wish was to break with this house with the eclectic use of classicist elements through an element reordering. Although it was a scandal that time, today it enjoys a high recognition. Annegret Burg names the Milanese Novecento movement (which later spread also to other cities, such as Rome or Naples) a movement around Giovanni Muzio and Giuseppe De Finetti though. The Novecento in the 1920s was characterised by leaning towards the typical Italian palazzo, with classicising details, but at the same time making use of the technological advances of the time. The flats were large and comfortable, and the buildings technically well executed, for which reason few of them need renovation today. In 1935 it was Muzio again to revolutionise the Novecento, building Casa Bonaiti, which was the begin of geometrical Novecento. It in the phase of decorative Novecento the classicising details were placed without an order on the facade, attracting so the name of "ugly house" to the manifesto, in the geometric Novecento apparent brick many times accentuates the play with different layers in the facade.

Apart of residential buildings, he was also active in urban planning, participated to competitions (including for the EUR), and, especially after the Second World War built churches. Muzio's churches lean towards roman catholic churches, and many times are part of a multifunction complex. The most mature church development is the last one, in Nazareth, Israel. Among his public buildings is the Catholic University of Milan, which marked the begin of this development, but also some public palaces. His interest in urban planning was reflected in the careful placing of his buildings in context, which was a common point of the Italian interwar movement and which he kept also for the postwar churches. Through the most notable urban development works is the Arengario in the Dome place in Milan, designed with co-authors. He was teaching in Milan and In Turin.

List of works

- 1922 Block Ca' Brutta, Milan, Italy
- 1931-30 Apartment building via Giuriati, Milan, Italy
- 1931-1932 Catholic University Sacro Cuore, Milan, Italy
- 1933-34 Apartment building Via Longhi, Milan, Italy
- 1935 Blocks Bonaiti-Malugani, Milan, Italy
- 1934-36 House for Journalists Via Monte Santo, Milan, Italy
- 1937 Palazzo della Cassa Di Risparmio delle Province
Lombarde, Milan, Italy
- 1937-42 Giovanni Muzio, Enrico Griffino, Pier Luigi Magistretti,
Piero Portaluppi Arengario
- 1938-42 Palazzo Popolo d'Italia Piazza Cavour, Milan, Italy
- 1939-1947 Convento di Sant'Angelo and Angelicum, Milan, Italy
- 1942-1950 Church of Santa Maria Mediatrice, Rome, Italy
- 1954-1955 Church of the Four Saint Evangelists, Milan, Italy
- 1955-1957 Monastery Clarisse, Gorla/Milan, Italy
- 1955-1964 Sacntuary of S. Antonio, Brunella di Varese, Italy
- 1956-1958 Church of San Giovanni Battista, Creta a Milano, Italy
- 1958-1960 Church of Madonna di Caravaggio, Pavia
- 1959-69 Basilica dell'Annunciazione, Nazareth, Israel

References and further reading

Burg, A. (1992) *Stadtarchitektur Mailand, 1920-1940 : die Bewegung des "Novecento Milanese" um Giovanni Muzio und Giuseppe de Finetti*, Basel : Birkhäuser Verlag.

F. Irace (1994) *Giovanni Muzio 1993-1982*, Milan: Electa.

Visual material:



Fig. 104. The begin of decorative Novecento, Ca' Brutta 1922 Via Turati and Via Moscova, Photo: M. Bostenaru, 2007 http://photo.net/photodb/photo?photo_id=5983936



Fig. 105. The begin of Geometric Novecento, Casa Bonaiti 1935-36 Piazza Fiume (today Piazza della Repubblica), Photo: M. Bostenaru, 2007 http://photo.net/photodb/photo?photo_id=5983967



Fig. 106. Giovanni Muzio with the engineer Pier Fausto Barelli Entrance building Università Cattolica Sacro Cuore, Photo: M. Bostenaru, 2007 http://photo.net/photodb/photo?photo_id=5983976

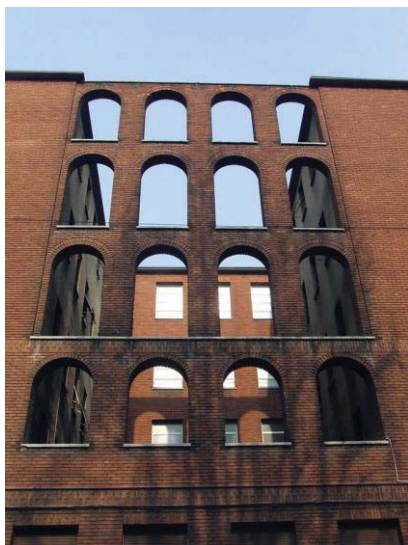


Fig. 107. Convent Sant'Angelo and culture centre Angelicum 1939-47 Corso di Porta, Photo: M. Bostenaru, 2007 http://photo.net/photodb/photo?photo_id=5986864



Fig. 108. Palazzo Popolo d'Italia 1938-42 Piazza Cavour 2, Via Vecchio Politecnico,
Photo: M. Bostenaru, 2007 http://photo.net/photodb/photo?photo_id=5986879



Fig. 109. Giovanni Muzio, Enrico Griffino, Pier Luigi Magistretti, Piero Portaluppi A-
rengario 1937-42, Photo: M. Bostenaru, 2007
http://photo.net/photodb/photo?photo_id=5984022



Fig. 110. Apartment building 1933-34 7 Via Longhi, Photo: M. Bostenaru, 2007
http://photo.net/photodb/photo?photo_id=5984008



Fig. 111. Casa Malugani 1936 Piazza della Repubblica, Photo: M. Bostenaru, 2007
http://photo.net/photodb/photo?photo_id=5983954



Fig. 112. House for Journalists 1934-1936 Via Monte Santo, Photo: M. Bostenaru, 2007
http://photo.net/photodb/photo?photo_id=5986860



Fig. 113. Apartment building 1931-32 (built; designed 1930) Via Giuriati, Photo: M. Bostenaru, 2007
http://photo.net/photodb/photo?photo_id=5984007

11.11 Haesler, Otto (1880-1962)

Photo in archinform <http://media.archinform.net/m/10000052.jpg>

The German architect Otto Haesler was trained in craft of building and as bricklayer before starting to work as an architect. 1906 he started to work independently in Celle, a city the image of which he influenced in the first third of the 20th century. Situated in the West of Germany, the geographic vicinity and the vicinity of style led to discussions between the architecture of Haesler and the Dutch models. 1925 he became member of Deutscher Werkbund. 1927 he became member of the research society for economic efficiency in housing building. It was in this research society where he tried to prove the efficiency of steel skeleton.

Before the war Otto Haesler used the style of the time – Jugendstil and neoclassicism. “Neues Bauen” marks the Aera of the Weimar Republic, the one during which his career developed. With the “Siedlung” Italian Garden he makes the first coloured neighbourhood of “Neues Bauen”. Georggarten, the second siedlung, was to make another innovation, the “Zeilenbau” (row housing).

Along with Bauhaus architects like Walter Gropius and Ludwig Mies van der Rohe he is considered an important representant of the so-called “Neues Bauen”. As such, he was proposed to lead Frankfurt am Main after Ernst May. In this context his works are concerned with social housing. In order to improve social housing he employed steel skeleton, something rare in housing building, but economically efficient for Germany, a country rich in this resource. Another mean was the typisation of the floor plan, with the goal of industrial production. He was the first to introduce the typical for Germany “Zeilenbau” in industrial production – parallel rows of blocks of apartments. It was the Zeilenbau which raised discussion in the postwar aera as not feasible for large housing areas. As such, Haesler introduced a type of urban organisation before Le Corbusier stipulated the building in the green and inversed the background and foreground in what is the built texture and what not in urbanism. Another innovation he introduced was the flat roof, which raised discussion.

As a reaction to the raise of National Socialism (Nazi) power, he opted for interior emigration. After the war he led the reconstruction of Rathenow. 1946 he moved into the sowjet led zone of Berlin. In Berlin he acted as professor of social housing, then leader of the department for industrialisation.

List of works

- 1924 Siedlung „Italienischer Garten“ (Italian garden), Celle,
Germany
- 1925 Siedlung Georgsgarten, Celle, Germany
- 1929–1931 Siedlung Rothenberg, Kassel, Germany
- 1929 Some buildings in the Siedlung Dammerstock, Karlsruhe,
Germany
- 1930–1931 Siedlung „Blumläger Feld“, Celle, Germany
- 1946–1953 Buildings in Rathenow

References and further reading

Oelker, S. (2002) Otto Haesler. Eine Architektenkarriere in der Weimarer Republik. München: Dölling und Galitz Verlag

Otto Haesler: [Mein Lebenswerk als Architekt] = "My Lifework as Architect". 1957. P. 30, 32, 33, XVIII. Images 34, 42, 44 and 47.

Visual material:

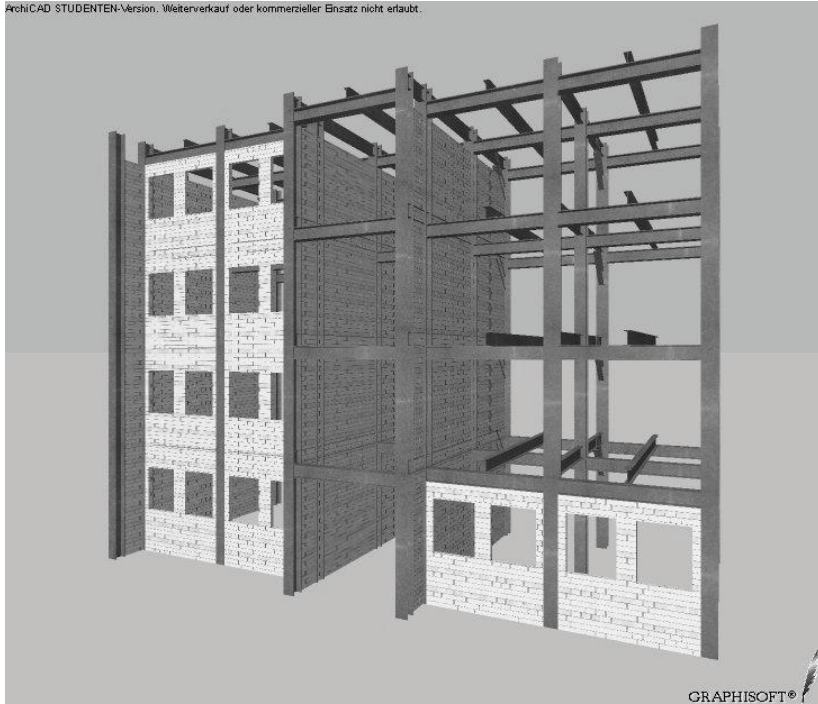
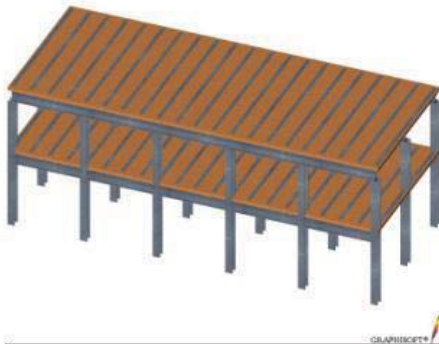


Fig. 114. Highrise building of the type during the building process. (archive photo presenting such a succession in the construction process can be seen on the example of Kassel-Rothenberg, architect Otto Haesler, in Haesler: Mein Lebenswerk als Architect. 1957, on page 33), Redrawing by M. Bostenaru included in World Housing Encyclopedia



Week 1



Week 2



Week 3

Fig. 115. Building process (archive views of steps in building Dammerstock Gruppe 16, architect Otto Haesler, can be seen in Stein Holz Eisen. 1929. on page 769), Redrawing by M. Bostenaru included in World Housing Encyclopedia



Fig. 116. Otto Haesler buildings in Dammerstock, Photo: M. Bostenaru, 2002 (highrise) and 2013 (lowrise)

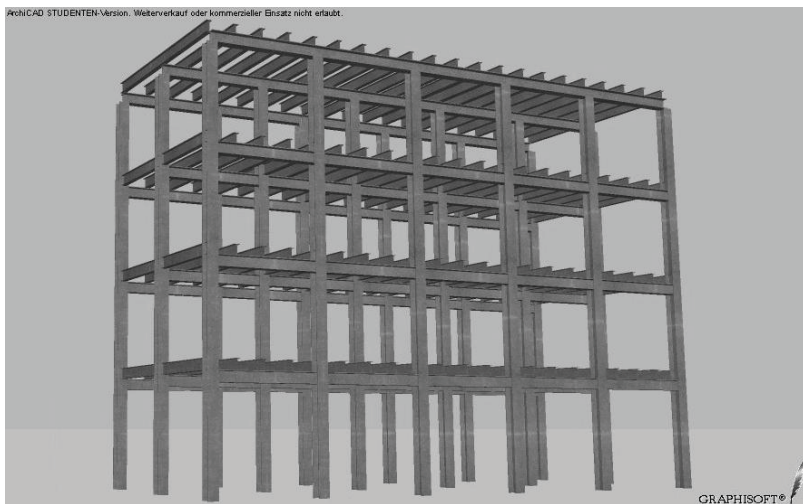


Fig. 117. Key load bearing elements: Variant 2 (a structure of this type is to be seen in Kassel-Rothenberg by architect Otto Haesler in Haesler: "Mein Lebenswerk als Architekt". 1957. Page 32), Redrawing by M. Bostenaru included in World Housing Encyclopedia

For a photo of Italian Garden see Wikipedia http://commons.wikimedia.org/wiki/File:Italienischer-Garten_2.JPG

11.12 Plečnik, Jože (1872-1957)

For a photo see http://commons.wikimedia.org/wiki/File:Jo%C5%BEE_Ple%C4%8Dnik_%281943%29,_Zbirka_upodobitev_znanih_Slovencev_NUK_-_Crop1.jpg

The Slovene architect Jože Plečnik worked as was trained as a carpenter before studying and then being trained in architecture in Vienna under the guidance of Secession architect Otto Wagner. Ljubljana belonged that time to Austria-Hungary, so he went to study in the capital city. He worked next in Vienna, but did remarkable works also in Prague (from 1911), influencing Czech Cubism, and working on the castle (1920-1935) and finally in his home city of Ljubljana from 1925 on. Instead of teaching in Vienna he taught in Prague. When moving to Prague, this belonged not anymore to collapsed Austro-Hungaria either, still Plečnik returned to finish work there till 1935.

In Vienna his most valuable buildings are the Zacherl house (1903-1905) and the Holy Spirit church (1910-13). In the later he looked for a language for the interior spatiality in reinforced concrete, being the first church of this kind. The Zacherl house featured innovation in the facade as well, its language can be put in dialogue with Modernist buildings emphasizing the vertical, such as the ARO/Patria building by Horia Creanga in Romania.

In Ljubljana he worked on defining the face of the city. After gaining national independence the face of city of Ljubljana was a question of pride in Slovenia, and the city rejected Master Plans by Max Weber and Camillo Sitte in favour of national ones. The Plečnik architectural tour is one of the first of this kind to promote the work of an architect instituted in a European city. Here not anymore the reinforced concrete he got used to in Vienna was the defining one. The buildings are, unlike the housing buildings of the Modernist Avantgarde, mainly office buildings or churches. We note here a building on a narrow lot between two streets (the Flatiron building of Ljubljana). From the high rise buildings remarkable is the National and University library (1930-36) and from the cityscape the “Three bridges” (1929-32). Other works include bridges along the river as well as a dam. Works include the reshaping of the cemetery.

Remarkable about Plečnik’s work is that it cannot be considered belonging to one style. Although starting with Secession, it includes also national, and own elements. The national elements put him in the row of those bringing to dialogue modernism and tradition, but also with the contemporary

style to Secession the National Romanticism. In a time when the innovation in architecture and building all anew was dominant, he turned towards restoration. This does not refer only to the Prague castle, but also to buildings in Ljubljana – churches, monasteries (open air theatre in the inside the courtyard of the former Monastery of the Holy Cross). Through these works, but also through the cemetery works, and the style we can see him as a precursor of Carlo Scarpa.

His work was recognised by numerous awards and honorary citizenships (Ljubljana) and doctorates (Vienna, Ljubljana), membership in Academies and of the RIBA. His not realised project of the Slovene Parliament building is on the 10 cent coin, while the old paper money displayed his portrait.

List of works

- | | |
|-----------|--|
| 1900-1901 | Langer House, Vienna, Austria |
| 1903-1905 | Zacherlhaus, Vienna, Austria |
| 1908-1913 | Church of the Holy Spirit, Vienna, Austria |
| 1920-1934 | Prague Castle (various projects), Prague, Czech Republic |
| 1924-31 | Church of St. Francis, Ljubljana – Šiška, Slovenia |
| 1925-1927 | Chamber of commerce, work and industry, Ljubljana, Slovenia |
| 1928-39 | Mutual Assurance Building, Ljubljana, Slovenia |
| 1929-1932 | "Tromostovje" or the Triple bridge, Ljubljana, Slovenia |
| 1929-1932 | Trnovo Bridge, Ljubljana, Slovenia |
| 1930-1941 | National and University Library, Ljubljana, Slovenia |
| 1931-1932 | Cobblers' Bridge (Čevljarski or, more accurately, Šuštarški most), Ljubljana, Slovenia |
| 1932-1934 | "Peglezen", the "Flatiron" house, Ljubljana, Slovenia |
| 1933-35 | Adaptation of defence wall on Grajski grič (the castle hill), Ljubljana, Slovenia |
| 1933-38 | Adaptation of church of St. Bartholomew, Ljubljana – Šiška, Slovenia |
| 1933-39 | Sluice gates on the Ljubljanica River, Ljubljana, Slovenia |
| 1937-1940 | Žale Cemetery, Ljubljana, Slovenia |
| 1939-1942 | The Fish Market, Ljubljana, Slovenia |
| 1939-1940 | The Ursuline gymnasium, Ljubljana, Slovenia |
| 1952-56 | Adaptation of Križanke, Ljubljana, Slovenia |

References and further reading

Stiller, A. (2006): Josef Plečnik – Architekt in Wien, Prag und Laibach. Salzburg/Munich: Verlag Anton Pustet.

Visual material:



Fig. 118. Triple bridge in Ljubljana, Photo: M. Bostenaru, 2008



Fig. 119. Intervention on existing buildings Križanke (open theatre) (1952-56) and Bartolomew church (1933-38), Photos: M. Bostenaru, 2008

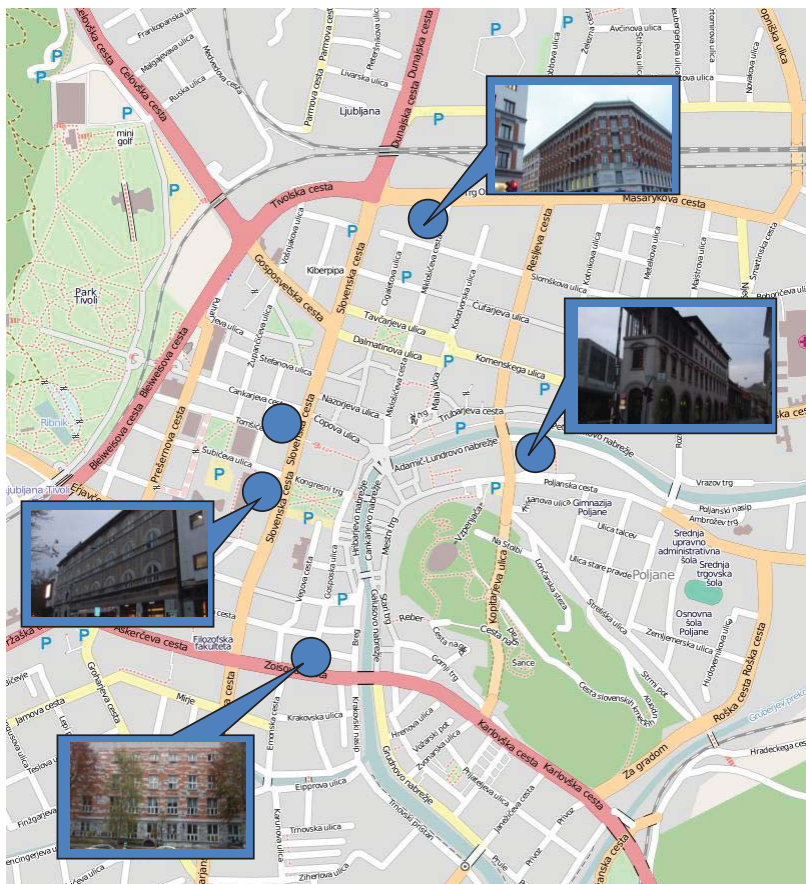


Fig. 120. High rise buildings in Ljubljana (Assurance building, Flatiron building, Ursuline, National and University library), From Bostenaru and Dill (2014)



Fig. 121. Holy Spirit church (1908-13), Vienna, Photo: M. Bostenaru, 2005



Fig. 122. Zacherl house, Vienna (1903-05), Photo: M. Bostenaru, 2005

11.13 Terragni, Giuseppe (1904-1943)

Photo for example at <http://paperarch.wordpress.com/the-danteum-of-giuseppe-terragni/>

The Italian architect Giuseppe Terragni, who attended the Polytechnic in Milan (1921-26), then opening an office in Como with his brother Attilio 1927, was a pioneer of a style called Rationalism. Rationalism was a contextual Modernism. Buildings were built in the city, next to older buildings, not in the periphery in the green like in other Western countries. Through this Rationalism can be called “another Modernism”. The style was contemporary with another movement in interwar Italy, the Novecento, represented not so much in Como, but in Milan, where Terragni also constructed, in cooperation with Pietro Lingeri.

Late 1927 and early 1928 an approach related to the Rome picturesque movement of Marcello Piacentini became known through the work of the Società degli Amici e Cultori d’Arte of Como, including initiatives of the later best known 1920-1940 architect of Italy, the young Giuseppe Terragni, “Terragni’s participation in the Sittesque movement of contextual design at a moment when he was also assisting the birth of Italian Rationalism” [Etlin, 1991, p. 121]. In December 1926 seven young Milanese architects (Gruppo 7) introduced in Italy the International Style under the name of “razionalismo” through a manifesto in *Rassegna Italiana* (Etlin, 1991, p. 225) and formed a movement, the Movimento Italiano per l’Architettura Razionale. “Italian Rationalists were intent upon creating a contemporary architecture particularly attentive to functional requirements and constructed with modern materials made into forms that evoked the spirit of a machine civilization. As in many other countries, these architects also attempted to imbue this international avant-garde with a national identity grounded in tradition” [Etlin, 1991, p. 226]. Modern materials such as concrete and glass were combined with materials typical for Italy such as stone (in its polished white form for Rationalism). In the first phase the functional solution for the housing issues of an ordinary person stayed in foreground, although these aspects is not so widely known [Etlin, 1991, p. 226-229]. Rationalists architects participated at the IVth Congrès Internationaux d’Architecture Moderne in Athens in 1933 and in the subsequent competition for the 1934 regional plan for Como [Etlin, 1991, p. 228]. As the column and the arch built the vocabulary of the last centuries, the Gruppo 7

looked for the vocabulary of rationalist architecture and found [Etlin, 1991, p. 250]:

1. the lack of decoration;
2. the proportion and abstract rhythms;
3. the expression of the structural skeleton (“la construction apparente”);
4. the cantilevered balcony;
5. the corner window;

which were different of those five enounced by Le Corbusier for modern architecture.

In Como, the modern buildings of Terragni are dispersed through the city. The masterpiece of Terragni in the city of Como is undoubtedly Casa del Fascio (1932-36). Casa del Fascio was due to promote new architecture adequate for the regime of Benito Mussolini (Fascism). But also other buildings are remarkable, such as Casa Giuliani Friggerio, which inspired Peter Eisenmann in post-war design through morphogenesis. The Novocomum in Como (1928-29) by Giuseppe Terragni is the first modern housing building constructed in Italy. It uses a nautical imagery (was called “oceanliner”) which reminds the imagery of the Arkadenbazar by József Vágo in Hungary. The five residential buildings in Milan designed together with Pietro Lingeri further applied the functional criteria, with rooms possible to merge by opening of sliding doors, and prismatic geometry seen at Novocomum. The reinforced concrete skeleton builds an integral part of the concept and in case of Casa Rustici the boxlike aspect creates the mentioned parallel to the Italian palazzo [Etlin, 1991, p. 271].

List of works

1926-27	New facade of Metropole Suisse, Como, Italy
1927-29	Novocomum, Como, Italy
1931-32	Monumento dei Caduti (Monument of the Fallen), Como, Italy
1932-36	Casa del Fascio, Como, Italy
1933-35	Casa Rustici, Milano, Italy (with Pietro Lingeri)
1933	Casa Toninello, Milano, Italy (with Pietro Lingeri)
1933	Casa Ghiringhelli, Milano, Italy (with Pietro Lingeri)
1934	Casa Lavezzari, Milano, Italy (with Pietro Lingeri)
1935	Casa Rustici-Comolli, Milano, Italy (with Pietro Lingeri)
1936-37	Villa Bianca, Seveso, Italy
1936-37	Kindergarten Sant’Elia, Como, Italy
1939-42	Block of flats Giuliano Frigerio, Como, Italy

References and further reading

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Germer, S. (ed.) (1991) *Giuseppe Terragni : 1904 - 43 ; Moderne und Faschismus in Italien*, Munich: Klinkhardt und Biermann.

Libeskind, D., Rosselli, P., Terragni, A. (2005) *The Terragni Atlas: Built Architecture*, Milan: Skira editore.

Zevi, B. (1989) *Giuseppe Terragni*, Zürich: Verl. für Architektur Artemis.

Visual material:



Fig. 123. Asilo Sant Elia, Photo: M. Bostenaru, 2009



Fig. 124. Novocomum (view from the interior to Monumento dei Caduti), Photo: M. Bostenaru, 2009



Fig. 125. Casa del Fascio, Photo: M. Bostenaru, 2009



Photos 2005

**Fig. 127.** Spread of Terragni buildings in Milan, After M. Bostenaru (2014)

11.14 Andreescu Haret, Virginia (1897-1962)

Photo small size at <https://www.bnab.ro/2012/expo-arh-rom/17/>

The Romanian architect Virginia Andreescu Haret, the first woman architect in Romania and at least one of the first of the world, was born in a family of artists, the brother of her father being the painter Ioan Andreescu. Along with the School of Architecture, she attended the School of Beux Arts, and the Romanian Academy Library holds a collection of her stamps. She graduated 1919 from the School of Architecture after which she went, on her own, as the Romanian School in Rome was funded afterwards, to continue studies in Italy, where she worked under the guidance of archaeologists. Probably from this stay is her taste for research, being then present at conferences abroad, but also doing history of architecture studies (ex. building surveys with Ghika-Budesti). She married in 1928 the son of the scientist Spiru Haret, Spiru Haret-Gold, civil engineer, and they had a son. One of the issues in researching the work of women in architecture is that it was possible for her to profess and design more than 30 built projects because of the good cooperation with her husband. She worked first at the Technical Service of the Ministry of Education, for which reason she did numerous and important projects for schools, in Bucharest (Șincai and Cantemir Lyceum) as well as in the country (Bârlad, Focșani). Side by side with buildings of large dimensions, many of them protected as monuments, she also designed houses for one or two families. Both the small houses and the multi-family houses also included cheap housing. The cheap family housing on Hristo Botev street is monument protected, while in what regards small houses Virginia Haret designed two groups of villas. At the begin these small size houses were built in the New-Romanian style, and many of them in the neighbourhood of Cotroceni. Later on she renounced at this style and moved towards Modernism. Notable for this is that her first house was in New-Romanian style, the house of the family however was Modernist. Movement to Modernism also was marked by the move to new technologies, building in reinforced concrete. From her New-Romanian time dates one of her best projects was Block Tinerimea Română. Outside Bucharest, where most of these buildings are, a notable building is the Cinema-Casino in the resort city of Govora.

The Danish architect and designer Arne Jacobsen first trained as a bricklayer before studying architecture at the Royal Danish Academy of Fine Arts, Copenhagen (1924-27). Under the auspices of the director of furniture

design, Kaare Klint, Jacobsen explored what would become hallmarks of Nordic Modernism – refined texture, integrity of form and advanced workmanship. After graduation, a successful architectural career was launched, yet it is Jacobsen’s furniture design, especially his chairs, which have brought the prolific designer international acknowledgement on a larger scale. Researching her work is not only important for gender issues, as it does today the COST action genderSTE, but also for early mobility of architects, from Romania to Italy and back, in the context of the EU.

List of works

- 1920-25, 24-28 Lyceum Gh. Șincai, Bucharest, Romania
- 1922 Housing block Calea Victoriei corner Str. Frumoasă, Bucharest, Romania
- 1923 House Stănescu, Bucharest, Romania
- 1924-27 Palace Tinerimea Română (Romanian Youth), Bucharest, Romania
- 1925-26 Lyceum Dimitrie Cantemir
- 1926 Deposits, administration, staff housing, Banca Viticolă, Bucharest, Romania
- 1926 House, Intrarea Spătarului, Bucharest, Romania
- 1927-34 Church Holy Trinity, Bucharest, Romania
- 1928 House Rosetti-Solești (extension), Bucharest, Romania
- 1928 Cinema-theatre, casino, Băile Govora, Romania
- “Cheap housing” palace Piața Rosetti, Bucharest, Romania
- 1928 House A. Opran, Bucharest, Romania
- 1929 Group of 7 villas with each two apartments for the employees of a bank, Bucharest, Romania
- 1931 House Haret
- 1933-34 House Radu & Elena Perianu, Bucharest, Romania
- 1936 House Constantinescu, Bucharest, Romania
- 1936 House Panait Mazilu, Bucharest, Romania
- 1936-37 House Dumitru Stoica, Bucharest, Romania
- 1935 House Nestor, Parc Panduri, Bucharest, Romania

References and further reading

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Visual material:

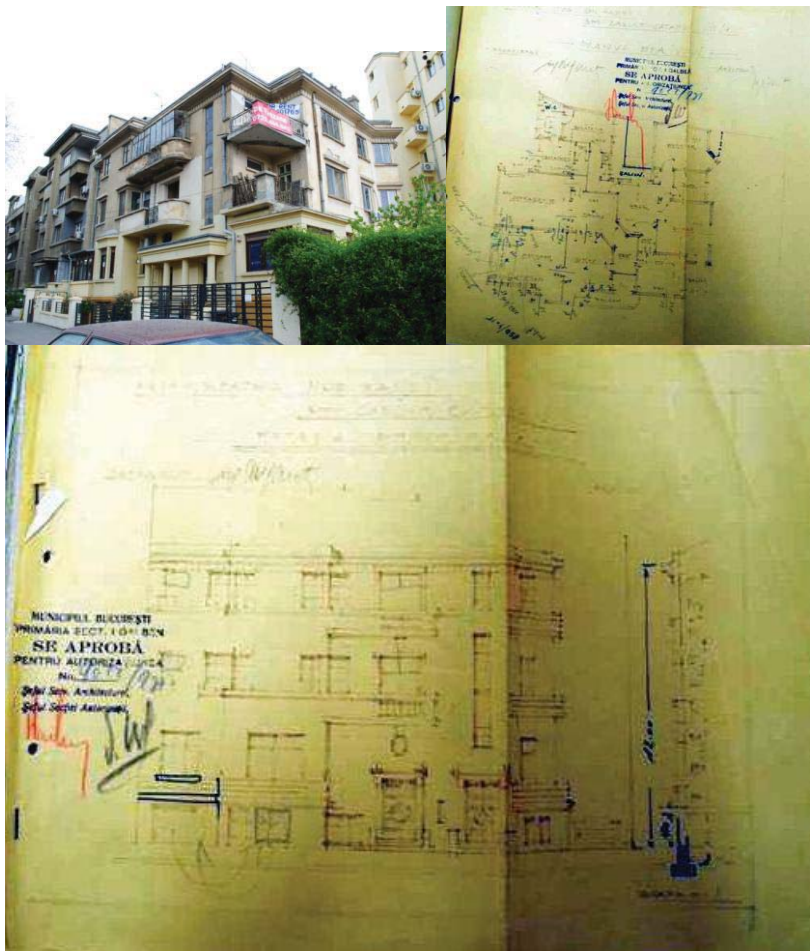


Fig. 128. Family Haret house (1931), Photo: M. Bostenaru, 2011. Archive plan and facade: Town hall of Bucharest city (PMB fond tehnic).

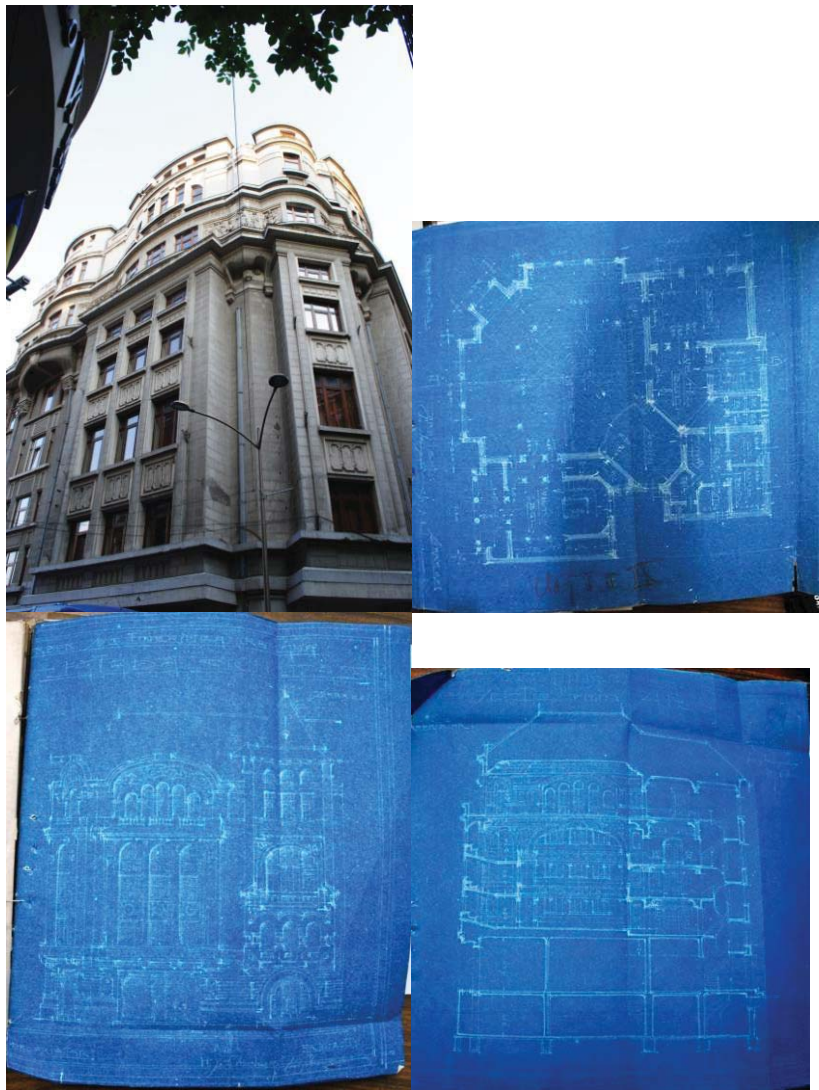


Fig. 129. Tinerimea Romana block (1923-27), Photo: M. Bostenaru, 2012. Archive plan, facade and section: National archives of Romania.



Fig. 130. Industrial building in reinforced concrete. Water tower (1927). Town hall of Bucharest archives.



Fig. 131. Group of villas (1929), Photo: M. Bostenaru, 2011



Fig. 132. Villa eng. Dumitru Stoica (1937), Photo: M. Bostenaru, 2011

12. Forms for architectural guide Eastern Europe – example: Hungary/ Maria Bostenaru

These forms serve as example for how forms were organized in the architecture guide for Eastern Europe from the seminar in Karlsruhe, used as literature for some of the routes.

12.1 DER NATIONALSTIL

12.1.1 Ödön Lechner

1845 Pest - 1914 Budapest

1865	Architecture studies TU Pest
1866-68	Architecture studies Bauakademie Berlin
Workshop in Budapest together with Pártos	
1875-78	Collaboration in Paris - arch. C. Parent (castle restoration)
1889	Study trip to England (oriental art collections)

Main works

1883-84	Town hall, Szeged
1883-84	Block of flats of the railway company, Budapest
1888-89	Thonet-Haus, Budapest
1890	Town hall, Kecskemét
1891-96	Applied art museum and school, Budapest
1893-96	Church St. László, Budapest
1895	Own house
1896-99	Geological institute, Budapest
1898	Block of flats with workshop, Budapest
1899-1901	Post bank office, Budapest
1900	Villa Zala György, Budapest
1905	Villa Sipéki, Budapest
1907-13	St. Elisabeth church Bratislava

He developed a strong national style (Hungarian national style) as a result of his impressions through the London travel.

Predecessor: Frigyes Feszli.

Followers: S.Baumgarten & Zs.Herczegh, M.Komor & D.Jakab, G.Márkus. The followers are not successful in developing his own style.



Fig. 133. Post bank office, Budapest, architect Ödön Lechner (1899-1901), Photo: M. Bostenaru, 2003.



Fig. 134. Applied art museum and school, Budapest, architect Ödön Lechner (1891-96). Photo: M. Bostenaru, 2003.



Fig. 135. Geological institute, Budapest, architect Ödön Lechner (1896-99), Photo: M. Bostenaru, 2003.



Fig. 136. Cifra house, Kecskemét, architect Géza Márkus (1902). Photo: M. Bostenaru, 1999.

12.2 JUGENDSTIL

12.2.1 Hungarian architects of Art Nouveau.

The floral Art Nouveau of French origin has only an important representant in Hungary: Ede Magyar

1906-07 Palais Reök, Szeged



Fig. 137. Palais Reök, Szeged, architect Ede Magyar (1906-07). Photo: M. Bostenaru, 1999.

More expressive ist he building of Frigyes Spiegel:

1897

Block of flats in the Isabella street, Budapest



Fig. 138. Block of flats in the Isabella street, Budapest, architect: Frigyes Spiegel (1897), Photos: M. Bostenaru, 2003 and 2006 (before and after restoration).

12.2.2 The Viennese architects Otto Wagner and Josef Hoffmann build only a few buildings in Budapest.

Works of Otto Wagner:

- 1870-72 Synagoge in the Rumbach Sebestyen Street, Budapest
- 1882 Project for the Parliament building



Fig. 139. Synagoge in the Rumbach Sebestyen Street, Budapest, architect Otto Wagner (1870-72). Photo: M. Bostenaru, 2003.

Works of Josef Hoffmann:

- 1909-10 House Dr. Pickler, Budapest
- 1922 Villa Duckel, Budapest

12.3 IRON CONCRETE CONSTRUCTION and HOUSING CUBES

12.3.1 István Medgyaszay (original name: Benkó) 1877 Budapest - 1959 Budapest

- 1900-03 Study in the school of Otto Wagner as scholarship holder of the TU Budapest
- 1904 Architecture diploma at TU Budapest
- 1904-06 Occupation with the Hungarian popular architecture
- 1906-07 Study trip to Munich, Berlin, Paris
- 1907 Work in the office Hennebique, Paris
- 1908 Lecture on the VIIIth Architecture Congress in Vienna about the artistic features of reinforced concrete architecture
- Starting 1925 Privatdozent at TU Budapest

Main works:

- 1904-06 Housing of the artistic colony, Gödöllő
- 1907-08 Theatre building, Veszprém
- 1908-10 Catholic church, Rárosmulyad
- 1909 Theatre, Ödenburg (transformation)
- 1910 Housing in the Elek Street, Budapest
- 1911-12 Catholic church, Ógyula
- 1914 Block of flats in the Dohány Street, Budapest
- 1916 Pavillons of the war exhibition in Lemberg
- 1921 Church, Püspökladány
- 1925 Main urban housing neighbourhood in the Budaörsi way, Budapest
- 1926 Theatre, Nagykanizsa
- 1927 Sporthotel, Mátaháza
- 1929 Reformed Lyceum Baár-Madas, Budapest

He innovated the construction art through the new employment of reinforced concrete.

Medgyaszay built his main work before WWI.

His architecture cannot be categorised in any style.



Fig. 140. Theatre building, Veszprém, Architect: István Medgyaszai (1907-08). Photo: M. Bostenaru, 2003.

12.4 NATIONAL ROMANTICISM

12.4.1 Aladár Árkay

1868 Timisoara - 1932 Budapest

Study at TU Budapest

Visit of the B. Székely and K. Lotz painting schools

Work in Paris

Work in Vienna (Fellner and Helmer)

Collaboration with Hauszman

Collaboration with Mór Kallina (father in law)

His works are differently influenced by Historismus, Jugendstil, National Romanticism.

After WWI: expressive, modern Style

Main works:

1905	Villa Babochay, Budapest
1908	Own workshop, Budapest
1912	Reformed church, Gorki alley, Budapest
1912	House Tarnay, Budapest
1910-13	Neighbourhood of the judges and lawyers, Budapest
1923	Catholic chappel, Budapest
1929	Catholic church, Győr
1931-33	Catholic church, Budapest (with son: Bertalan Árkay)
1933	Foundation church, Mohács

Other representatives of the National Romanticism (the so-called „Youngs”, architects trained at the TU Budapest were: Károly Kós, Béla Jánosky, Denés Györgyi, Dezső Zrumeczki, T. Szivessy, V. Mende, E. Thoronczay-Wigand

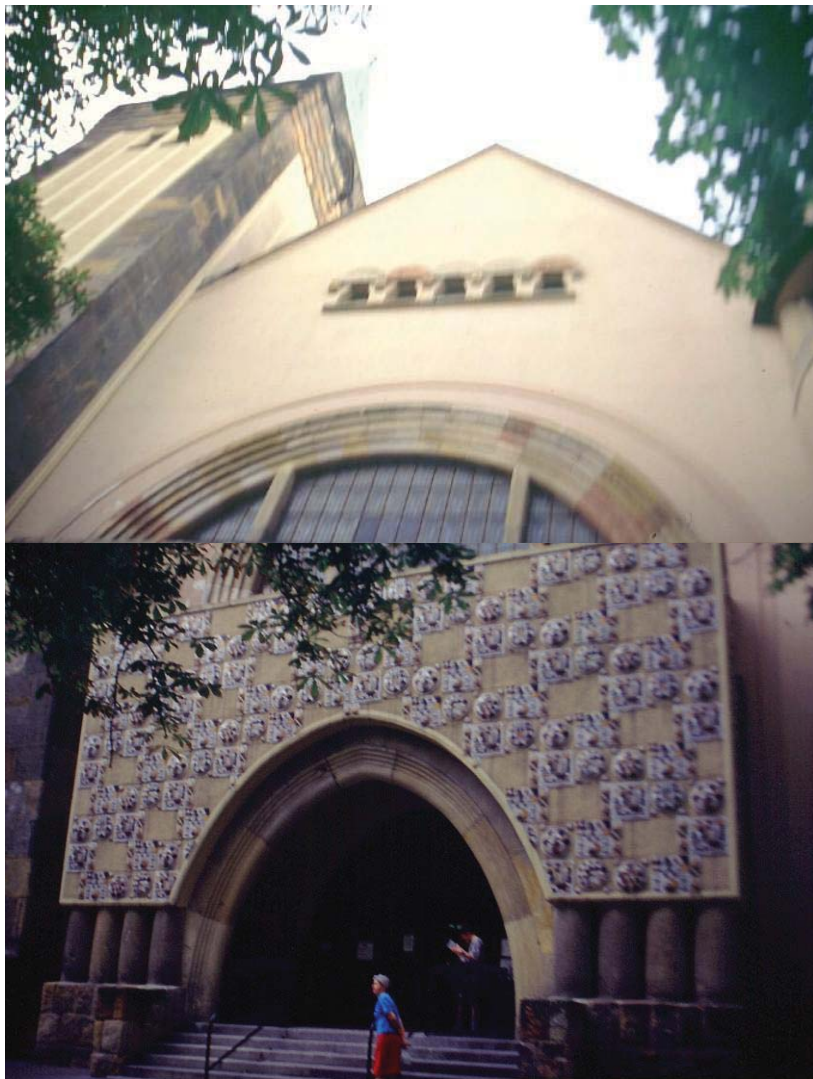


Fig. 141. Reformed church, Gorki alley, Budapest, architect Aladár Árkay (1912), Photo: M. Bostenaru, 2003.



Fig. 142. Zoo. Architect Károly Kós with Dezső Zrumezcki, Photo: M. Bostenaru, 2003.

12.5 THE FAÇADE OF BLOCKS OF FLATS AND SHOPS SOCIAL HOUSING

12.5.1 Béla Lajta (original name: Leitersdorfer) Budapest 1873 - Wien 1920

- 1896 Architecture diploma at TU Budapest
 Work at Hauszman
 Study trip to Italy, Spain, England and Germany (Architecture studies
 middle ages and early Renaissance)
 Study trip through France, Spain, Morocco
 1897-98 Work at Messel (Berlin)
 1898-99 Work at Norman Shaw (London)

Main works:

- 1905-06 Villa D. Malonay
 1905-08 Institution for the blind, Budapest
 1906-07 Entrepreneur portal Hecht, Budapest
 1906-07 Dormitory for the elderly, Budapest
 1908 Jewish cemetery, Budapest
 1908-09 Night bar Parisiana, Budapest
 1909-10 Main urban commercial school, Budapest
 1911 Banc in the Elisabethcity, Budapest
 1911 Block of flats in Népszínház Street, Budapest
 1912-13 House Rózsavölgyi, Budapest
 1914-30 Gymnasium, Budapest (with A.Hegedüs)

His first works are under the influence of Lechner. Influence of the Northern European Jugendstil. The last works are influenced by Rationalism, where the ornaments are employed only for the underlining of individual elements and the shapes vocabulary belongs already to Modernism.



Fig. 143. Language for reinforced concrete – the weak ground floor in public-private language. Rózsavölgyi house (1911-12), Budapest, Hungary. Architect Béla Lajta. Photo: M. Bostenaru, 2002. Plans: Budapest City Archives, <http://lajtaarchiv.hu>. Comparison with Loos house, Michaelerplatz, Vienna (1909). Photo: M. Bostenaru, 2006.



Fig. 144. Block of flats in Népszínház Street, Budapest, architect Béla Lajta (1911). Photo: M. Bostenaru, 2003.

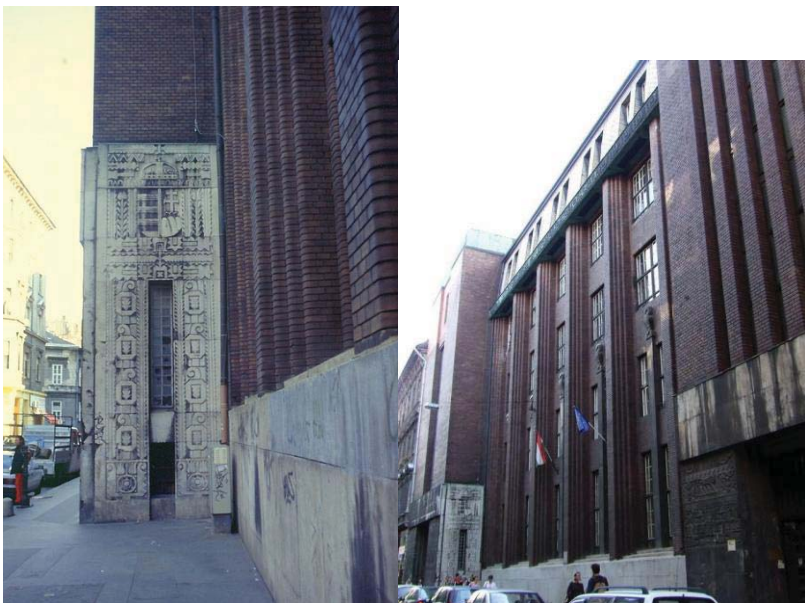


Fig. 145. Gymnasium, Budapest (architects B. Lajta with A.Hegedüs 1914-30). Photo: M. Bostenaru, 2003.

12.5.2 József Vágó

Oradea 1877 - Paris 1947

1900 Architecture diploma at TU Budapest
 Work with Ödön Lechner (2 churches in Preßburg)
 1902 Scholarship abroad
 Till 1911 office, together with his brother László (urban planner,
 theatre constructor)
 1918 after WWI member of the central council for housing
 1919 President of the directorate for construction
 After the failure of the Republic of Councils emigration to Italy
 1926 I Prize at the competition for the UNO in Geneva
 1930-38 buildings in Budapest, but has permanent residence in
 Paris

Main works:

1905 Block of flats at Boráros Place, Budapest
 1906-07 Gutenberg dormitory and Intim theatre
 1908 Arkadenbasar, Budapest
 1916 Villa Grünwald, Budapest

In his architecture there is a synthesis of the Hungarian national ambitions and the geometrical shapes language of Hoffmann.

The Arkadenbasar is characteristic for the development of the new facade of the blocks of flats and shops.

Characteristic examples for this development are:

1911 D.&Zs.Jónás Ware house Szénássy and Bárczai, Budapest
 1912 Béla Lajta Rózsavölgyi House, Budapest
 1912 B.Málnai&Gy.Haász Block of flats, Irány Str., Budapest
 1912 B.Málnai&Gy.Haász Czech-Hungarian industry bank, Budapest
 1913 E.Töry&M.Pogány ADRIA Assurances, Budapest



Fig. 146. Buildings of József Vágo in Switzerland (designed during the stay in Rome : the ONU palace, 1926), Italy (Rome: Hotel de la Ville, 1922), Romania (Oradea: Darvas La Roche palace, 1909-1910) and Hungary (Arkadenbasar, Budapest, 1908). Photo: M. Bostenaru, 2006, 2009, 2014.



Fig. 147. Warehouse Szénássy and Bárczai, Budapest, architects D.&Zs.Jónás (1911), Block of flats, Irány Str., Budapest, architects B.Málnai&Gy.Haász (1912), Czech-Hungarian industry bank, Budapest, architects B.Málnai&Gy.Haász (1912), ADRIA Assurances, Budapest, architects E.Töry&M.Pogány (1913). Photo: M. Bostenaru, 2003.

12.5.3 Béla Málnai

1878 Budapest - Budapest 1941

1901	Architecture diploma at TU Budapest
From 1901	Work at Ödön Lechner
Till 1907	Work at Béla Lajta
1907	Office together with Gyula Haász
1908-11	Redacteur at the magazine „A ház“ (The house)
From 1909	Member oft he art association KÉVE
1919	Hungarian Republic of Councils: Member of the advising gremium of the artistic directorate
from 1925	designs new Baroque buildings
in the 1930s	designs functionalistic blocks of flats

Main works (together with Gyula Haász); since 1908 also independent:

1903	Business house in Budapest
1909	Villa Szedő, Budapest
1909-10	Block of flats Hungária Ring street, Budapest
1910	Block of flats Eötvös Street, Budapest
1910	Block of flats Visegrádi Street, Budapest
1911	House, Budapest
1912	Czech-Hungarian Industry Bank, Budapest
1927	Block of flats, Budapest
1931	Villa Mende, Budapest

Málnai dealt in first line with questions of housing construction.

The English social world of thoughts has influenced him strongly.

Together with Gy. Haász he designed an own block of flats type, with *coeur d'honneur*

But the most important remains the renounce at ornament, the economic efficiency.



Fig. 148. Block of flats Hungária Ring street, Budapest. Architects: Málnai and Haász (1909-10). Photo: M. Bostenaru, 2003.

12.6 THE AVANT-GARDE IN EXILE

12.6.1 Lajos Kassák

1887 Ereskujvár - 1967 Budapest

1899-1907	Autodidact education, while working in metal works, engagement in the workers movement
1907	Walking Budapest-Paris
1909	Paris: contacts to Apollinaire, Delaunay, Picasso, Modigliani
1912	Writing
1915	Magazine "A Tett"; will be prohibited later
1916	Founding of group "MA" with S. Bortnyik and B. Uitz
1919	Emigration to Vienna
1920	Organiser of the Avant-garde in Vienna (magazine MA).
1920-25	6 issues of MA appear
1921	Individual exhibition in Galerie Würtel, Vienna
1926	Return to Budapest
1927	Activistic magazine "Dokumentum"
1928-38	Magazine "Munka"
1922	"Buch neuer Künstler" (Book of new artists)
1950	Freelance artist (surrealist Collages)

Main works:

1920-30	Collages
1924-26	Advertisement projects
1922	Bildarchitektur II (Project of an advertisement kiosk), guache, today in Nürnberg
1922	Buch neuer Künstler
1923	Image architecture, pencil on paper, today in Nürnberg
1923	MA-Book, Kassák-poetry, Berlin, Der Sturm Verlag

"Wir können uns in die gegebenen Rahmen der Gesellschaft oder der Kunst nimmermehr fügen.

Und wir wollen aus Altem kein Neues komponieren.

Und wir wollen schlechterdings nicht komponieren.

Unser Zeitalter ist das der Konstruktivität.

Kunst, Wissenschaft, Technik berühren sich an einem Punkt. Es muß geändert werden!

Es muß geschaffen werden, denn bewegung heißt schaffen.

Die Bewegung muß in Gleichgewicht gebracht werden, denn so kann man zur Form gelangen.

Die neue Form ist die Architektur.

Das gründliche Aufräumen.

Die Stärke des Willens.

Die Einfachkeit des Sicherheitsgefühls.

Die neue Kunst aber ist einfach, wie die Güte des Kindes, kategorisch und sieghaft über alle Stoffe."

Vienna, 31 May 1922 Ludwig Kassák

Preface to

Buch neuer Künstler

Vienna

12.6.2 Laszló Péri

1899 Budapest - 1967 London

1918	Adherance to the artist group MA
1918	Emigration over Vienna to Paris
1920	Move to Berlin
1922	Adherance to the group "Der Sturm"
1924-28	Turning towards architecture
1928	Change to realistic, engaged plastic
1933	Move to London
1938	Move to Camden
From 1939	British citizen
From 1950	Turning towards Quäkertum

Works with architectural focus:

1920-21 Spatial construction III, painted concrete, 527x408mm, Slg. Herzogenrath, Köln

1922 Spatial construction IV, painted concrete, 730x570, Slg. v. Bartha, Basel

1923 Spatial construction VII, painted concrete, 620x680,
Slg.Laszlo, Basel
Posters, cover projects

12.6.3 Vilmos Huszár

1884 Budapest - 1960 Paris

Studies in Budapest

Studies in München

Studies in Voorburg

1917 Founding member of De Stijl

1918 First interior designs: house of the industrial magnate
Bruynzeel

12.6.4 Fréd Forbát

1897 Pécs - 1972 Stockholm

1914 Architecture study TU Budapest

1918 Entrance in the circle Galilei

1918 Move and study at the TH München, at Theodor Fischer

1920-22 Work at the Bauhaus in Weimar

From 1923 Freelance architect

1925-28 Chief architect Sommerfeld-Konzern in Berlin

From 1928 Own office in Berlin, citizen of the German imperium

1929 Rejection of a professorship at the Bauhaus, Dessau

1930 Teacher at the private artistic school Itten. CIAM member

1932-33 Works in the UdSSR, with Ernst May

1933-38 Freelance architect in Pécs, Hungary

1938 Emigration to Schweden

Till 1942 Urban planning tasks in Lund and Stockholm

1959-60 Urban planning professor at the TU Stockholm

Works during the exile:

1920-21 Abstract compositions: Paintings, landscape with houses

1921-22 Design of a house in Stadthagen, Berlin-Dahlem

1922 Design of a one family house, Bauhaussiedlung, Weimar

1922 "Baukasten im Großen" (construction cube in big), project
with Walter Gropius

1922-23	Project of a workshop house at Horn, Weimar
1923	Project for a two family house, Guthenberg street, Weimar
1929-30	Sport-Club Charlottenburg, Berlin - Eichkamp
1931	Large neighbourhood Haselhorst, Berlin – Spandau

12.6.5 László Moholy-Nagy

1895 Bácsborsód - 1946 Chicago

1913-18	Law studies in Budapest
1914-17	Military service in WWI
1917	Meeting the circle of MA
1918	Turn towards art
1920	Emigration to Vienna, later Berlin
1921	Participation at the van Doesburgs constructivits congress, Weimar
1922	Exhibition gallery "Der Sturm" with L. Péri
1922	Representance oft he 1. German Artistic Exhibition, Mos- cow
from 1923	Professor at Bauhaus
1928	Short stay in Budapest
1934	Emigration to London over Amsterdam
1937	Move to USA, Director of the "New Bauhaus", Chicago
1938	Founding the "School of Design" (since 1944 "Institute of Design")

Main works:

1920-28	Compositions, Image architecture, sculptures
1922	Cinetic constructive force system
1922-30	Light requisit for an electrical scene
1929	Scenography projects and scene photos for "Hoffmanns stories"

Die Überlagerungen von Metalldetails und Schatten.

Wiederauftauchender Schatten; plötzlich der Schatten eines Ballons,
umgeben von starkem Licht,

der sich über dem ursprünglichen Schatten auf- und abbewegt.

Das Lichtrequisit dreht sich; es wird von oben, von unten, von vorn, von
hinten sichtbar; in ruhiger,

in beschleunigter, in verzögerter, in gegenläufiger Bewegung.

Eine Fülle von Details.

Ein dicker schwarzer glänzender Ball rollt von links nach rechts.

Von rechts nach links. Unaufhörlich.

Positive und negative Bilder, Aufblenden, Prismen;

sich immer wieder auflösend.

Bewegungen, seltsam sich verschiebende Raster.

"Betrunkene" Filter, Gitter.

Blick durch kleine Öffnungen; durch sich automatisch verändernde
Blenden

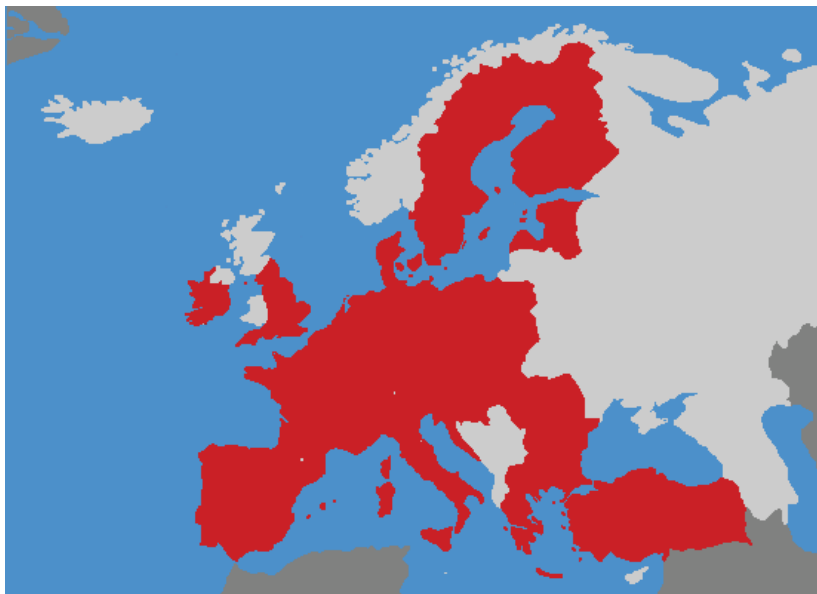
Blendende, sich bewegende Licht-Blitze. Kreisende Spiralen, die immer
wieder auftauchen. Alle feste Formen lösen sich in Licht auf.

In Vision in Motion, Chicago 1947

Poetry to the light game

Black-White-Grey

13 Study trips to interwar and turn of the century (forerunners) architecture / Maria Bostenaru



This part builds the core of the digital work. Printing all the image material would not have been possible, hence a digital database was created. The material was systemised as part of the Marie Curie European Reintegration Grant PIANO (http://cordis.europa.eu/result/rcn/86705_en.html), and the online image archive made in frame of the NeDiMAH short visit. As for now photos are uploaded on photo.net, where Maria Bostenaru has an account, and partially till transfer on Facebook. The database will be enriched with adding addresses as in the tours, and maps, building descriptions, and grouping by geographic position will be done. Historical network research will look also for other connections than geographical. The addresses will be referred to as google maps. An example of tour is already available for Virginia Haret as we saw. Also, the digital version permits enrichment over time. The images were first uploaded on the facebook account, then transferred to the more professional on <http://www.photo.net>. On how a digital

tour is a certain city has to be made talks an article of the first two authors in the book “Planning and Designing Sustainable and Resilient Landscapes”, a concept result of the NeDiMAH short visit, available under http://link.springer.com/chapter/10.1007/978-94-017-8536-5_12 (“Spatial Street Network and Urban Routes Around the Modernist Boulevard in Bucharest” by Maria Bostenaru Dan and Alex Dill). The concept can be applied for any other route.

- **Trips after the reintegration grant**
- **Trips during the reintegration grant**
- **Trips during the main Marie Curie Fellowship**
- **Earlier trips**

13.1 Trips after the reintegration grant

http://photo.net/photodb/folder?folder_id=1079080

Brno, Czech Republic.

This study trip was done in conjunction with the participation to the EGU GA in 2015 for which funding was provided by the postdoc scholarship of project POSDRU/159/1.5/S/133391 (structural funds).

Works to be visited:

House of service, Brno, Vladimir Karfik, 1930-31

Circle illness assurance, Zahradnikova 2-4, Brno, Jindrich Kumpost, 1922

House Kumpost, Barvicova str. 15, Brno, Jindrich Kumpost, 1923-24

Life assurance building of Mohren province, Mozartstr. 3, Brno, Arnost Wiesner, 1920-25

Czech Union bank, Beethovenstr. 4, Brno, Arnost Wiesner, 1920-24

Crematorium. Gihlavská Str. 1, Brno, Arnost Wiesner, 1925-30

Ceremony chappel of the central cemetery, Konevora 198, Bohuslav Fuchs, 1925-27

Row houses in the Masaryk neighbourhood, Barvicova 4-14, Bohuslav Fuchs, 1923-24

Urban apartments Husovice, Novackova str. 49-55, Bohuslav Fuchs, 1926-27

Werkbund exhibition "Novy dum" (The new house) 1928, Brno (houses 1-3 B. Fuchs, houses 4-5 J. Stepanek, houses 6-8 J. Grunt, house 9 J. Kroha, house 10 H. Foltyn, house 11 M. Putna, house 12-13 J. Visek, house 14. J. Syryste, house 15-15 A. Wiesner)

Cafe Zehman, Kolist Park, Brno, (reconstructed 1964), Bohuslav Fuchs, 1925-27

Villa Tugendhat, Cerna-Pole-Bezirk (black field), Brno, Mies van der Rohe, 1928-30

Hotel Avion, Ceska-str. 20, Brno, Bohuslav Fuchs, 1927-28

Villa Münz, Pisarky Hroznova 19, Brno, Arnost Wiesner, 1924-26

Villa Neumark, Pisarky Vinarsky 38, Brno, Arnost Wiesner, 1928-29

House, Klacelova 8, Brno, Jan Visek, 1926

Café ERA, Zemedelská nr. 30, Brno, Josef Kranz, 1927-29

House, Kotlárska-str., Brno, Jindrich Kumpost, 1929

Block of flats for the construction society „Stavog“, Pod Kastany-str. 26-30,
Tábor str. 28, Leninova str. 93-97, Brno, Jindřich Kumpost, 1928-29
Block of flats, Obranců míru 80, Brno, Otto Eissler, 1930
Block of flats, Botanická str, Brno, Otto Eissler, 1931
Children hospital, Černá Pole 9, Brno, Bedřich Rozehnal, 1947-53
Villa Fuchs, Hvězdárská str 2, Brno, Bohuslav Fuchs, 1927-28
House J. Kranz, Alesova 24, Brno, Josef Kranz, 1933
House of J. Kroha, Sedláčková 45, Brno, Jiří Kroha



Ernö Goldfinger, London. Photos: M. Bostenaru, 2015.
http://photo.net/photodb/folder?folder_id=1078646

This study trip took place in conjunction with the Marie Curie Fellows Association Annual General Assembly, for which funding was provided by the Marie Curie Fellows Association.



Interwar architecture in Zagreb. Photos: M. Bostenaru, 2014
http://photo.net/photodb/folder?folder_id=1078646

This study trip took place in conjunction with the NeDiMAH steering committee meeting, for which funding was provided by ESF.



Interwar architecture in Budapest. Photos: M. Bostenaru, 2014.

http://photo.net/photodb/folder?folder_id=1074572

<https://www.facebook.com/media/set/?set=a.10203544033864026.1073741892.1310055151&type=1&l=634186175c>

This study trip took place in frame of a DOMUS scholarship in Budapest, Hungary in March 2014. Funding was provided by the Hungarian Academy of Sciences.

Documented were the modernist buildings at Pasaret and in Lipotváros and Újlipotváros.

In image

„Dunapark“ House, Budapest, Béla Hofstätter, Ferenc Domány, 1937

Literature:

András Ferkai: Buda építészete a két világháború között, MTA Művészettörténeti Kutató intézet, Budapest, 1995

András Ferkai, Branczik Márta, Hajdú Virág, Molnos Attila, Oláh Éva: Pest építészete a két világháború között, Modern Építészetről Kht., Budapest, 2001

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Further objectives are:

Villa, Szépvölgyi str., Budapest, József Fischer, 1935

„Atrium“ House, Budapest, Lajos Kozma, 1934

Factory building Stühmer, Budapest, Aladar & Victor Olgyay, 1941



Woman architects in Italy. Photos: M. Bostenaru, 2014.

<https://www.facebook.com/media/set/?set=a.10205114778171652.1073741936.1310055151&type=1&l=33ec5a2aa7>

http://photo.net/photodb/folder?folder_id=1079081

This study trip took place in conjunction with the participation to the genderSTE COST action „Engendering cities“ conference in Rome, for which funding was provided by the Marie Curie Fellows Association.

See also EUR for Maria Teresa Parpagliolo landscape architecture and Mostra d’Oltremare for Stefania Filo Speciale contribution.



Interwar churches in Italy. Photos: M. Bostenaru, 2014.

<https://www.facebook.com/media/set/?set=a.10205114529845444.1073741934.1310055151&type=1&l=9ffda18a2a>
http://photo.net/photodb/folder?folder_id=1079082

This study trip took place in conjunction with the participation to the genderSTE COST action „Engendering cities“ conference in Rome, for which funding was provided by the Marie Curie Fellows Association.



Campus of Sapienza university. Photos: M. Bostenaru, 2014.

<https://www.facebook.com/media/set/?set=a.10205114819172677.1073741937.1310055151&type=1&l=be85b17bd9>
http://photo.net/photodb/folder?folder_id=1079083

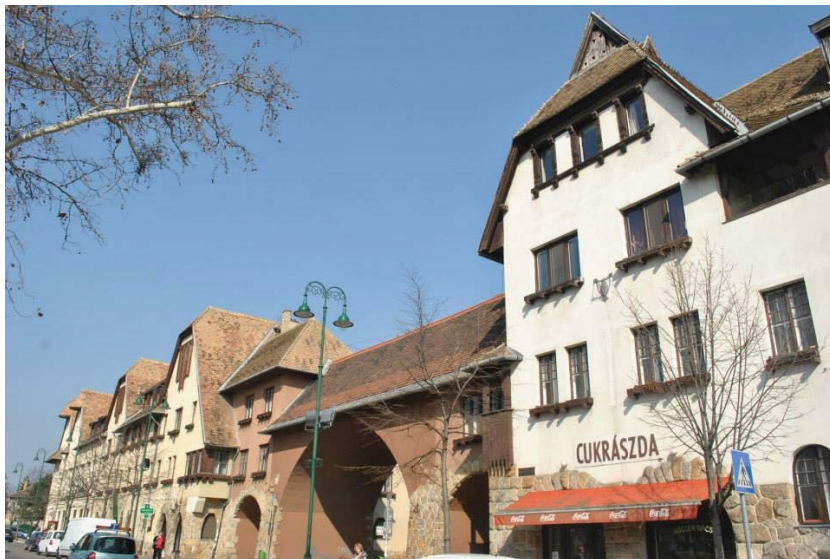
This study trip took place in conjunction with the participation to the genderSTE COST action „Engendering cities“ conference in Rome, for which funding was provided by the Marie Curie Fellows Association.



Bellavue estate, Denmark. Photos: M. Bostenaru, 2014.

http://photo.net/photodb/folder?folder_id=1074600

This study trip took place in conjunction with the participation to the Euro-Science Open Forum 2014 in Copenhagen, for which partial support was provided by the Marie Curie Fellows Association.



Karoly Kos in Budapest. Photos: M. Bostenaru, 2014.

<https://www.facebook.com/media/set/?set=a.10203537130331442.1073741891.1310055151&type=1&l=511049a25d>

http://photo.net/photodb/folder?folder_id=1079084

This study trip took place in frame of a DOMUS scholarship in Budapest, Hungary in March 2014 for which funding was provided by the Hungarian Academy of Sciences.



Secession in Budapest. Photos: M. Bostenaru, 2014.

<https://www.facebook.com/media/set/?set=a.10203673761987148.1073741897.1310055151&type=1&l=f25d42335a>
http://photo.net/photodb/folder?folder_id=1079085

This study trip took place in frame of a DOMUS scholarship in Budapest, Hungary in March 2014 for which funding was provided by the Hungarian Academy of Sciences.

Reference:

Krisztina Somogyi, Zoltan Katona: Budapest Építészeti Kalauz – Szecesszió Guide map to Budapest's Art Nouveau Architecture, A&Z 1.1 Térképműhely, 2012, 978-963-89534-0-7



Farkas Molnár in Budapest. Photos: M. Bostenaru, 2014.

<https://www.facebook.com/media/set/?set=a.10203532803943285.1073741889.1310055151&type=1&l=90838a67f0>
http://photo.net/photodb/folder?folder_id=1079086

This study trip took place in frame of a DOMUS scholarship in Budapest, Hungary in March 2014, for which funding was provided by the Hungarian Academy of Sciences.

Literature:

András Ferkai: Molnár Farkas, Terc, 2011, ISBN 9789639968134

Further objectives are:

Villa, Lejtő str., Budapest, Farkas Molnar, 1932

Villa and block of flats, Trombitás str., Budapest, Farkas Molnar, 1936

House, Csévi str, Budapest, Farkas Molnar, József Fischer, 1935

Housing complex of the OTI Pension assurance, Budapest, architects team Molnár, Fischer and Ligeti, 1934

Employees dormitory of the OTI workers hospital, Budapest, Molnár, Fischer, 1936

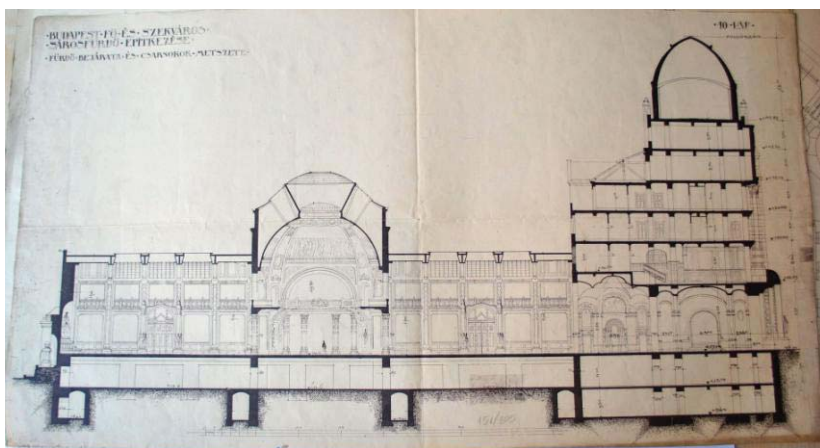
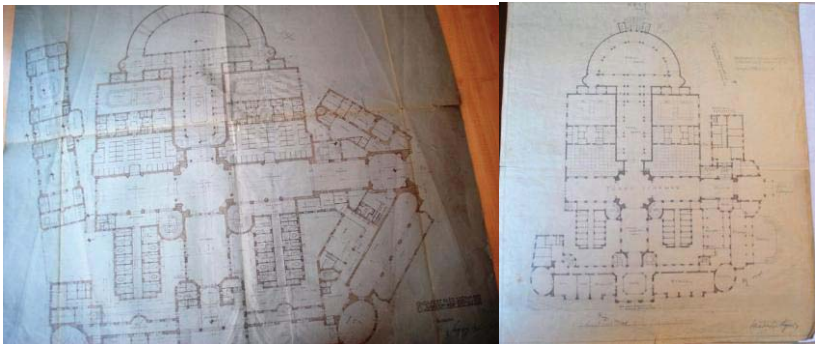


Art Nouveau thermal bath in Budapest. Photos: M. Bostenaru, 2014.

<https://www.facebook.com/media/set/?set=a.10203532892265493.1073741890.1310055151&type=1&l=7fb71920e8>
http://photo.net/photodb/folder?folder_id=1069943

This study trip took place in frame of a DOMUS scholarship in Budapest, Hungary in March 2014 for which funding was provided by the Hungarian Academy of Sciences.

The research was deepened with archive material from the Budapest city archives (see next page), interviews of contemporary architects and the training of a student on the topic.



Gellért bath plan and section, courtesy of the Budapest city archives.



Pelișor castle. Photos: M. Bostenaru, 2013.

<https://www.facebook.com/media/set/?set=a.10202617031729552&type=1&l=e68c359fcf>

http://photo.net/photodb/folder?folder_id=1079087

This study trip took place in frame of an invited STSM in Romania. Funding for the STSM was provided by COST.



Paul Smărăndescu in Sinaia. Photos: M. Bostenaru, 2013.

<https://www.facebook.com/media/set/?set=a.10202943911501342.1073741881.1310055151&type=1&l=5995e1f5ec> (and other sightseeing)
http://photo.net/photodb/folder?folder_id=1079392

This study trip was done as vacation trip and hence involved no extra costs.

Literature:

Lucrări de arhitectură 1907-1942 [Album] / Paul Smărăndescu, Tipografia Universul; București, 1942

Paul Smărăndescu designed the master plan of Sinaia and a number of villas in it.

For works in Bucharest, see <http://paul-smarandescu.blogspot.ro/>



Antwerpen. Photos: M. Bostenaru, 2013.

<https://www.facebook.com/media/set/?set=a.10202541651565095.1073741873.1310055151&type=1&l=db195a2daa>
http://photo.net/photodb/folder?folder_id=1079088

This study visit took place in conjunction with an evaluation session at REA, for which funding was provided, in the free time.



Resseau Art Nouveau exhibition. Photos: M. Bostenaru, 2013.

<https://www.facebook.com/media/set/?set=a.10202541332517119.1073741872.1310055151&type=1&l=4d04c28de1>

http://photo.net/photodb/folder?folder_id=1079089

This visit of an exhibition took place in conjunction with an evaluation session at REA, for which funding was provided, in the free time.



Meisterhäuser Dessau, Friedrich Ebert Alee, Walter Gropius, 1925-26
Photos: M. Bostenaru, 2013.

<https://www.facebook.com/media/set/?set=a.10201418065996158.1073741850.1310055151&type=1&l=980fbd3059>



Bauhaus Dessau. Bauhausstraße 1, Dessau, Walter Gropius, 1925-1926.
Photos: M. Bostenaru, 2013.

<https://www.facebook.com/media/set/?set=a.10201416870766278.1073741849.1310055151&type=1&l=ba621056d7>
http://photo.net/photodb/folder?folder_id=1079090

Literature:

August Gebessler: Gropius Meisterhaus Muehe/Schlemmer, Die Geschichte einer Instandsetzung. Krämer, Karl, Stuttgart, 2003, ISBN 978-3782815130

These study trips took place in conjunction with the participation at the Digital Landscape Architecture conference as post-conference tours, for which partial support has been provided by the organisers.



József Vágo in Rome. Photos: M. Bostenaru, 2012.

<https://www.facebook.com/media/set/?set=a.10201606329262622.1073741857.1310055151&type=1&l=d203a2cb44>
http://photo.net/photodb/folder?folder_id=1079091

This study trip took place in conjunction with the Marie Curie Fellows Association Annual General Assembly in Rome for which funding was provided by the Marie Curie Fellows Association.



EUR 1942 Rome. Photos: M. Bostenaru, 2012.

<https://www.facebook.com/media/set/?set=a.10200144341793849.2199006.1310055151&type=1&l=d2334ec31d>
http://photo.net/photodb/folder?folder_id=1079092

This study trip took place in conjunction with the Marie Curie Fellows Association Annual General Assembly in Rome for which funding was provided by the Marie Curie Fellows Association.



Accademia di Romania a Roma. Photos: M. Bostenaru, 2012

<https://www.facebook.com/media/set/?set=a.10200142302182860.2198963.1310055151&type=1&l=d882054eb0>
http://photo.net/photodb/folder?folder_id=1079093

This study trip took place in conjunction with the Marie Curie Fellows Association Annual General Assembly in Rome for which funding was provided by the Marie Curie Fellows Association.



20th century architecture in historic context in Faro, Portugal. Photos: M. Bostenaru, 2012

<https://www.facebook.com/media/set/?set=a.4678992775362.2191421.1310055151&type=1&l=d8d31e0297>
http://photo.net/photodb/folder?folder_id=1079094

This study trip took place in frame of an excursion during the Short Term Scientific Mission at the University of Algarve in Faro, Portugal, in frame of the TU0801 COST Action „Semantic enrichment of 3D city models for sustainable urban development“ for which funding was provided by COST.

Reference:

Joao Ramires Fernandes, António Serrano Santos, Armando Cochado Silva, Ana Paula Gordinho: Architectural Map Guide Mapa de Arquitectura de Faro, Argumentum, 2003, ISBN 972-8479-21-2

Main works:

City Hall, Rua do Municipio 13, arch. Jorge de Oliveira 1945 (facade), building from 1883

Palace of Tears, Praca Alexandre Herculano 15-21/Rua Rebelo da Silva 42-50/Rua Castilho 37-41B (Sec XIX, ALT 1924)

The Alexandre da Fonseca's Family House, Largo D. Marcelino Franco 2 / Rua da Misericórdia 58-60 (Sec XIX, ALT 1937, AMP 1940)

Belmarco Palace, Largo D. Marcelino Franco 1 / Rua de Sao Francisco 13-15 / Rua José Maria Brandeiro 12-14, arch. Norte Junior (1912)

Fialho Palace / Nossa Senhora do Alto College, Quinta do Alto, arch. Norte Junior (1915), Gomes da Costa (1960)

Tomás Cabreira School, Rua Dr. Manuel Arriaga 2, 1918 Liceu

Casa dos Azulejos, Rua de Sao Pedro 45, arch. José Barros (1926)

Bank of Portugal, Praca Dr. Francisco Gomes 12, arch. Adaes Bermudes (1926)

Vivenda Marilia, Rua Dr. Justino Cumano 15-17/ Rua Almeida Garrett 44-52, arch. Jaime Ruivo (1930)

Café Alianca, Rua Dr. Francisco Gomes 7-11 / Rua da Marinha 8-12, 1930

Palacete Guerreirinho, Rua Ventura Coelho 31-33, arch. Norte Junior (1936)

Social Housing, Bairro dos Centenarios, 1940

Casa do Poeta, Rua General Humberto Delgado 59, arch. Jorge de Oliveira (1944) IIM

Faro High School / Joao de Deus Secondary School, Largo do Infante, arch. José Costa e Silva (1948)



1929 exhibition in Sevilla - interwar architecture in Andalusia. Photos: M. Bostenaru, 2012.

<https://www.facebook.com/media/set/?set=a.4646287877760.2190499.1310055151&type=1&l=af9863705d>

http://photo.net/photodb/folder?folder_id=1079096

This study trip took place in frame of an excursion during the Short Term Scientific Mission at the University of Algarve in Faro, Portugal, in frame of the TU0801 COST Action „Semantic enrichment of 3D city models for sustainable urban development“, for which funding was provided by COST.



Via XX Settembre Genova. Photos: M. Bostenaru, 2012.

<https://www.facebook.com/media/set/?set=a.4611434486447.2189538.1310055151&type=1&l=32d0d86c33>

http://photo.net/photodb/folder?folder_id=1079097

This study trip took place in conjunction with the Junior Summit „Water“ for which funding was provided by ESF.



The begin of reinforced concrete: Genova – Porchedu. Photos: M. Bostenaru, 2012.

<https://www.facebook.com/media/set/?set=a.4598079392578.2189182.1310055151&type=1&l=7bbaac2919>

http://photo.net/photodb/folder?folder_id=1079098

This study trip took place in conjunction with the Junior Summit „Water“ for which funding was provided by ESF.



Art Nouveau in Stresa. Photos: M. Bostenaru, 2012.

<https://www.facebook.com/media/set/?set=a.4597828906316.2189172.1310055151&type=1&l=9c7a451aee>
http://photo.net/photodb/folder?folder_id=1079099

This study trip took place in conjunction with the Junior Summit „Water“ for which funding was provided by ESF.



Early 20th century concrete industrial construction Suceava. Photos: M. Bostenaru, 2012.

<https://www.facebook.com/media/set/?set=a.4495320023658.2186149.1310055151&type=1&l=980db0b0a1>

http://photo.net/photodb/folder?folder_id=1079100

This study trip took place on the occasion of the opening of a cultural centre at this location. As an invited speaker for the event funding was provided by the Architects' Order.



Richard Bordenache flood reconstruction in Arges. Photos: M. Bostenaru, 2012.

<https://www.facebook.com/media/set/?set=a.4522603265722.2187069.1310055151&type=1&l=42a326389f>
http://photo.net/photodb/folder?folder_id=1079101

This study trip took place as vacation trip and involved no special funding.

2013 a trip to the archives to consult the design took place also as vacation trip.

Currently research for a book funded by the “Ion Mincu” University of Architecture and Urbanism on this topic is being done.



Jozef Hoffman in Romania. Photos: M. Bostenaru, 2012.

<https://www.facebook.com/media/set/?set=a.4443405085817.2184769.1310055151&type=1&l=c2c3c9f53a>
http://photo.net/photodb/folder?folder_id=1079102

This study trip took place as vacation trip and involved no special funding.



20th century architecture in Dublin. Photos: M. Bostenaru, 2012.

<https://www.facebook.com/media/set/?set=a.4360791180521.2182637.1310055151&type=1&l=0a9d10310d> and
<https://www.facebook.com/media/set/?set=a.10200090635771232.2198057.1310055151&type=1&l=f1f2544496>
http://photo.net/photodb/folder?folder_id=1079103

This study trip took place in conjunction with the NeDiMAH steering committee meeting and the EuroScience Open Forum participation, both in 2012 for which funding was provided by ESF and respectively the Marie Curie Fellows Association.

Works visited:

1900-15	Iveagh-Buildings, McDonnell and Ried, Joseph and Smithem, Kaye Parry and Ross
1903-04	Guinness Store House, Market street, A. H. Hignett
1937-41	Airport terminal, Collingstown, Desmond Fitzgerald



Hamburg, Germany. Photos: M. Bostenaru, 2012.

<https://www.facebook.com/media/set/?set=a.4364753839585.2182752.1310055151&type=1&l=07f6962276>

http://photo.net/photodb/folder?folder_id=1079104

This study trip was done in conjunction with the NeDiMAH workshops at the Digital Humanities conference in Hamburg for which funding was provided by ESF.



Early 20th century architecture in Madrid, Spain. Photos: M. Bostenaru, 2012.

<http://www.facebook.com/media/set/?set=a.3749194050975.2171286.1310055151&type=3&l=c148a34ac6>

http://photo.net/photodb/folder?folder_id=1079105

This study trip was done in conjunction with a TU0801 COST meeting (Semantic enrichment of 3D city models for sustainable urban development) in Madrid for which funding was provided by COST.

Literature:

Antón Capitel und Wilfried Wang (eds.) Architektur im 20. Jahrhundert. Spanien, Prestel (München, New York)

Raul Rispa (1998) Birkhäuser Architekturführer Spanien. 20. Jahrhundert, Birkhäuser Verlag, ISBN 978-3-7643-5747-4

Works visited:

- Art Nouveau

Hospital San Francisco de Paula, Calle Raimundo Fernández Villaverde 18, Madrid, Antonio Palacios Ramilo, 1908-16

Association of Beautiful Arts, Calle Alcalá 42, Madrid, Antonio Palacios Ramilo, 1919-26

School house Menéndez y Pelayo, Calle Méndez Alvaro 16, Madrid, Antonio Flórez, 1923-29

Banco de Vizcaya, Calle Alcalá 45, Madrid, Manuel Galindez / Fernando Arzadún, 1930-32

- interwar

University city, Madrid from 1927, Modesto López Otero (leadership)

Cinema Barceló, Plaza de Barceló 11, Madrid, Lluís Gutiérrez Soto, 1930

Capitol, Gran Vía 41, Madrid, Luis Martínez Feduchi / Vicente Eced, 1931-33

Siedlung El Viso, Madrid, Rafael Bergamín, 1933-36

Casa de las Flores, Calle Hilarión Esteva, Madrid, Secundino Zuazo, 1930-31

Block of flats, Calle Miguel Ángel 2-6, Madrid, Luis Gutiérrez Soto, 1936-41

Horse riding La Zarzuela, Madrid, Carlos Arniches / Martín Domínguez / Eduardo Torroja (engineer), 1935-36



Interwar architecture in Bruxelles. Photos: M. Bostenaru, 2012.

<http://www.facebook.com/media/set/?set=a.3617697123634.2168510.1310055151&type=1&l=4b8b48fca2>

http://photo.net/photodb/folder?folder_id=1079106

This study trip was done in conjunction with an evaluation session at the REA and involved thus no additional costs.

Literature:

Brussels guide

Herman van Bergeijk, Otakar Mácel (1998) Birkhäuser Architekturführer. Belgien, Niederlande, Luxemburg. 20. Jahrhundert, Birkhäuser Verlag (Basel, Berlin, Boston), ISBN 3-7643-5765-7



Mies van der Rohe pavillion in Barcelona, 2011
http://photo.net/photodb/folder?folder_id=1079259

This study trip was done in conjunction with an ESF conference participation in Saint Feliu. Partial funding was provided for the conference only.

For interpretation, see the contributions on „original and replacement“ by Alex Dill in this book.



Interwar architecture in Barcelona, Spain. Photos: M. Bostenaru, 2011.

<http://www.facebook.com/media/set/?set=a.2815190061459.2152805.1310055151&type=1&l=81e9339fb3>
http://photo.net/photodb/folder?folder_id=1079107

This study trip was done in conjunction with an ESF conference participation in Saint Feliu. Partial funding was provided for the conference only.

Literature:

Antón Capitel und Wilfried Wang (eds.) Architektur im 20. Jahrhundert. Spanien, Prestel (München, New York)

Raul Rispa (1998) Birkhäuser Architekturführer Spanien. 20. Jahrhundert, Birkhäuser Verlag, ISBN 978-3-7643-5747-4

Works visited:

Block of flats Sant Jordi, Carrer Pau Claris 81, Barcelona, Francesc Folguera, 1929-31

Block, Carrer Muntaner 342-348, Barcelona, Josep Lluís Sert, 1929-31

Block, Via Augusta 61, Barcelona, Germán Rodríguez Arias, 1930-31

House Bloc, Paseo Torres i Bages 91-105, Barcelona, Josep Lluís Sert / Joan Bautista Subirana / Josep Maria Torres Clave, 1931-36



Art Nouveau in Barcelona. Photos: M. Bostenaru, 2011.

<http://www.facebook.com/media/set/?set=a.2815345905355.2152808.1310055151&type=1&l=f19c435cab>
http://photo.net/photodb/folder?folder_id=1079108

This study trip was done in conjunction with an ESF conference participation in Saint Feliu. Partial funding was provided for the conference only.

Literature:

Antón Capitel und Wilfried Wang (eds.) Architektur im 20. Jahrhundert. Spanien, Prestel (München, New York)

Raul Rispa (1998) Birkhäuser Architekturführer Spanien. 20. Jahrhundert, Birkhäuser Verlag, ISBN 978-3-7643-5747-4

Works visited:

Hospital Sant Pau, Avinguda Sant Antoni Maria Claret 167, Barcelona, Lluís Domènech i Muntaner, 1902-12

House Terrades, Avinguda Diagonal 416, Barcelona, Josep Puig i Cadafalch, 1903-05

Palau de la Música Catalana, Sant Pere Més Alt 13, Barcelona, Lluís Domènech i Muntaner, 1905-08



Gaudi. Photos: M. Bostenaru, 2011.

<http://www.facebook.com/media/set/?set=a.2815270343466.2152806.1310055151&type=1&l=da48fadf2a>

http://photo.net/photodb/folder?folder_id=1079109

This study trip was done in conjunction with an ESF conference participation in Saint Feliu. Partial funding was provided for the conference only.

Literature:

Rainer Zerbst: Gaudí - The Complete Buildings, Taschen, 2005, ISBN 978-3822840726

Main works visited:

Park Güell, Barcelona, Antoni Gaudi, 1900-14

House Batlló, Barcelona, Antoni Gaudi, 1904-06

House Milá, Barcelona, Antoni Gaudi, 1905-10



Park Guell. Photos: M. Bostenaru, 2011.

<http://www.facebook.com/media/set/?set=a.2815165180837.2152804.1310055151&ttype=1&l=6f252bf6e2>
http://photo.net/photodb/folder?folder_id=1079109

This study trip was done in conjunction with an ESF conference participation in Saint Feliu. Partial funding was provided for the conference only.



Regione Lombardia (Milan and San Pellegrino Terme), Italy, Art Nouveau architecture. Photos: M. Bostenaru, 2011.

<http://www.facebook.com/media/set/?set=a.2730425222391.2151548.1310055151&type=1&l=48d0dac287>

http://photo.net/photodb/folder?folder_id=1079110

This study trip was accompanying programme of the Culture funded project “Art Nouveau and Ecology”. Partial funding was provided by the project.



Riga, Latvia, National Romantic architecture. Photos: M. Bostenaru, 2011
<http://www.facebook.com/media/set/?set=a.2576967746050.2147510.1310055151&type=1&l=12417245f7>
http://photo.net/photodb/folder?folder_id=1079111

This study trip was done as accompanying programme of a meeting and Transport conference in Riga, Latvia, in frame of the COST action TU0801 (Semantic enrichment of 3D city models for sustainable urban development) for which funding was provided by COST.



Riga, Latvia, Art Nouveau architecture. Photos: M. Bostenaru, 2011.

<http://www.facebook.com/media/set/?set=a.2576864463468.2147497.1310055151&type=1&l=e840c2327a>
http://photo.net/photodb/folder?folder_id=1079112

This study trip was done as accompanying programme of a meeting and Transport conference in Riga, Latvia, in frame of the COST action TU0801 (Semantic enrichment of 3D city models for sustainable urban development) for which funding was provided by COST.

Buildings include:

A Kenins School, Terbatas iela 15/17, Riga, Konstantins Peksens, 1905

Alberta Str, Riga, Michael Eisenstein



Riga, Latvia, Perpendicular Art Nouveau. Photos: M. Bostenaru, 2011.

<http://www.facebook.com/media/set/?set=a.2580175346238.2147602.1310055151&type=3&l=8b97879fa8>

http://photo.net/photodb/folder?folder_id=1079112

This study trip was done as accompanying programme of a meeting and Transport conference in Riga, Latvia, in frame of the COST action TU0801 (Semantic enrichment of 3D city models for sustainable urban development) for which funding was provided by COST.



Warsaw, Poland, interwar architecture. Photos: M. Bostenaru, 2011.
<http://www.facebook.com/media/set/?set=a.2492241547948.2144761.1310055151&l=3c04c6a528&type=1>
http://photo.net/photodb/folder?folder_id=1079113

This study trip was done in conjunction with the participation to the Marie Curie Conference in Warsaw under the Polish presidency for which funding was provided by the European Commission.

Covered buildings:

WSM Rakowiec, Warsaw, Helena & Szmon Syrkus, 1930

House, Ul. Estonska, Warsaw, Jadwiga Dobrzynska/Zygmunt Loboda, 1932

House of the architect, Ul. Niegolewskiego, Warsaw, Zoliborz, Barbara and Stanislaw Brukalski, 1927

Block of flats, Ul. Mickiewicza, Warsaw, Zoliborz, Julius Zorawski, 1937

Three family house, Ul. Kattowicka, Warsaw, Bohdan Lachert/Josef Szanajca, 1928-29

House, Ul. Francuska, Warsaw, Lucian Korngold/Hendryk Blum, 1935

Block of flats, Ul. Jaworzynska, Warsaw, Helena and Szmon Syrkus, 1937

WSM colony IV, VII, Ul. Mickiewicz, Warsaw, Zoliborz, Barbara and Stanislaw Brukalski, 1929-31, 1930-34



Sfântu Gheorghe, Romania, Károly Koos architecture. Photos: M. Bostenaru, 2011

<http://www.facebook.com/media/set/?set=a.2295065418668.2136802.1310055151&l=88b296d876&type=1>

http://photo.net/photodb/folder?folder_id=1079114

This study trip was done as vacation stay and involved no special funding.



Octav Doicescu architecture around Bucharest. Photos: M. Bostenaru, 2011.
http://photo.net/photodb/folder?folder_id=1079393

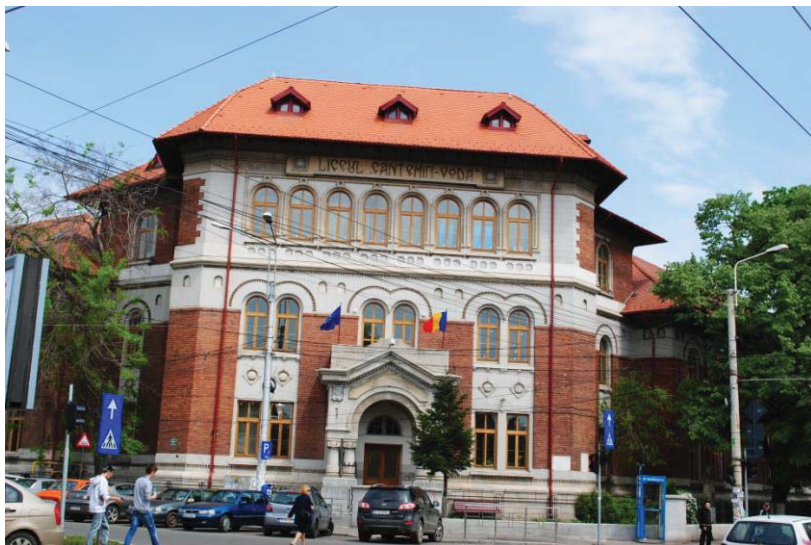
This study trip was done in the free time and involved no extra costs.



Bucharest, Ion Mincu architecture. Photos: M. Bostenaru, 2012.

http://photo.net/photodb/folder?folder_id=1079394

This study trip was done connected to different events: the TIEMS conference, the Arts et paysage exhibition of the French Institute, the visit of a Japanese Marie Curie fellow, and hence being also in the home city involved no costs.



Romania, Bucharest, Virginia Andreescu Haret architecture (the first woman architect). Photos: M. Bostenaru, 2010.

<http://www.facebook.com/media/set/?set=a.2075043678262.2127233.1310055151&l=6a2de0c325>

http://photo.net/photodb/folder?folder_id=1003651

This study trip was done in the city of the author. It was the consequence of giving a radio interview about the architect as first woman architect.

Later on, the research was extended with funding from the Architects' Order to a route:

<http://virginiaharet.blogspot.ro/>

Also archive research has been performed.

The research will continue in following the trace of the architect in Italy during a Romanian School in Rome stay.



Bruxelles, Belgium Art Nouveau circuit (including Palais Stoclet and Victor Horta architecture). Photos: M. Bostenaru, 2011.

<http://www.facebook.com/media/set/?set=a.2075112479982.2127237.1310055151&l=c2b9f808b7>

http://photo.net/photodb/folder?folder_id=1004885

This study trip was done in conjunction (weekend after) with the participation to a TU0801 COST meeting (Semantic enrichment of 3D city models for sustainable urban development) in Brussels for which funding was provided by COST.

13.2 Trips during the reintegration grant



Romania - Bucharest interventions on Marcel Iancu architecture. Photo: M. Bostenaru, 2010.

http://photo.net/photodb/folder?folder_id=994308

This study trip was done in the home city of the author and involved no special funding.

The map provided by the association e-card was used.



Romania - Bucharest Rudolf Fränkel architecture. Photos: M. Bostenaru, 2010.

http://photo.net/photodb/folder?folder_id=994207

This study trip was done in the home city of the author and involved no funding. For the identification of the building 3 sources were used:

- Brown-Manrique, G. (2009) Rudolf Fränkel and Neues Bauen: Works in Germany, Romania and the United Kingdom. Tübingen: Wasmuth. ISBN 978-3-8030-0695-0
- The archive research in the Canadian Centre of Architecture in Montreal, which involved original drawings and for which funding was partially provided by the CCA and partially by the Marie Curie European Reintegration Grant PIANO.
- Archive research at the Bucharest Town Hall for building plans.



Romania - Bucharest Henrietta Delavrancea-Gibory architecture. Photo: M. Bostenaru, 2010.

http://photo.net/photodb/folder?folder_id=993840

This study trip involved a tour in the home city of Maria Bostenaru Dan and there was no funding for it.

Doing the tour involved using a map provided by the Architects' Union.



Bulgaria – Balchik Henrietta Delavrancea architecture. Photos: M. Bostenaru, 2010.

<http://www.facebook.com/album.php?aid=2074466&id=1310055151&l=7ea803d253>

http://photo.net/photodb/folder?folder_id=1079116

The study trip to Balchik was done as vacation trip and there was no special funding for this.



Italy – Como. Photos: M. Bostenaru, 2009

http://photo.net/photodb/folder?folder_id=994977

The study trip to see interior spaces of Giuseppe Terragni buildings in Como was organized in conjunction with the participation to the PRECOMOS conference on “Preventive conservation” organised in Como. Funding for this participation was provided by the Marie Curie European Reintegration Grant PIANO.



Italy – Cernobbio. Photos: M. Bostenaru, 2009.

http://photo.net/photodb/folder?folder_id=994978

The study trip to Cernobbio was organized in conjunction with the participation to the PRECOMOS conference on “Preventive conservation” organised in Como. Funding for this participation was provided by the Marie Curie European Reintegration Grant PIANO.



Slovenia – Ljubljana Joze Plecnik. Photos: M. Bostenaru, 2008.

http://photo.net/photodb/folder?folder_id=971729

The study trip to Ljubljana was organised in conjunction with the participation to the CHRESP conference (Cultural heritage research meets practice) funded by a EC conference funding programme which provided partial support, the rest of the support being covered by the Marie Curie European Reintegration grant PIANO.

A report on the conference can be found here

<https://www.uauim.ro/cercetare/chresp/en/>

Main works:

Church of Hl. Franziskus, Siska, Ljubljana, Joze Plecnik, 1925-31

Tromostovje (Three bridges), Ljubljana, Joze Plecnik, 1929-32

National and university library, Ljubljana, Joze Plecnik, 1936-41

Zale central cemetery, Ljubljana, Joze Plecnik, 1938-40



Portugal - Porto Villa Serralves Photos: M. Bostenaru, 2010.

http://photo.net/photodb/folder?folder_id=995087

The study trip to Porto was organised in conjunction with the participation to the conference “Structures and architecture” in Guimaraes, Portugal. Funding for this was provided by the Marie Curie European Reintegration Grant PIANO.



France – Paris Auguste Perret, Henri Sauvage, Le Corbusier. Photos: M. Bostenaru, 2010.

<http://www.facebook.com/album.php?aid=2099106&id=1310055151&l=a938883ca3>

http://photo.net/photodb/folder?folder_id=1079117

The study trip to Paris was organised in conjunction with participation to the Marie Curie Fellows Association Annual General Assembly in December 2010. Funding for this trip was provided by the Marie Curie European Reintegration Grant PIANO.

Literature:

Bertrand Lemoine (2000) Birkhäuser Architekturführer Frankreich. 20. Jahrhundert, Birkhäuser (Basel, Berlin, Boston), ISBN 3-7643-6221-9



Czech Republic – Cubism Photos: M. Bostenaru, 2008

http://photo.net/photodb/folder?folder_id=994422

The study trip to Czech Republic was organized as vacation trip in conjunction with a pilgrimage to Lourdes. There was no special funding for this.

Shops building „To the Black Mother of God“, Ovocny trh 19/569, Prague, Josef Gocar, 1911/12

Forthcoming:

Office and shops building „Riunione Adriatica di Securita“ (heute Palast Adria), Jungmannova 31/36, Prague, Pavel Janak, 1921-25

Bank of the czech-slovak legions, Na porici 24/1046, Prague, Josef Gocar, 1921/23

Villa under Vysehrad, Libusina 3/49, Prague, Josef Chochol, 1911/12

Three part house, Rasin Quai 6/42, 8/47 and 10/71, Prague, Josef Chochol, 1912/13

Block of flats, Neklanova 30/98, Prague, Josef Chochol, 1913

Community housing, Elisky Krasnohorske 10-14/1023, 1021, 1037, Prague, Otokar Novotny, 1919/21

Cemetery entrance, Dablicka, Prague, Vlastislav Hofman, 1912/13

Werkbundsiedlung BABA

Villa Janak, Nad Patankou 16, Prague, 6 Dejvice 1785, Pavel Janak, 1931/32

Villa Maule, Nad Patankou 18, Prague, 6 Dejvice 1786, Josef Gocar, 1931/32

Villa Cenek, Na Babe 11, Prague, 6 Dejvice 1722, Ladislav Zak, 1932

Villa Zaoralek, Na Ostrohu 54, Prague, 6 Dejvice 1708, Ladislav Zak, 1931/32

Villa Herain, Na Babe 3, Prague, 6 Dejvice 1782, Ladislav Zak, 1928/32

Villa Hain, Na Vysocanskyhvinicich 32, Prague, 9 Vysocany 404, Ladislav Zak, 1932/37

Villa Suk, Na Ostrohu 49, Prague, 6 Dejvice 1794, Hana Kucerova-Záveská, 1932



Estonia - Tallinn interwar architecture. Photos: M. Bostenaru, 2009
http://photo.net/photodb/folder?folder_id=994310

The study trip to Tallin was done as a one day trip in conjunction with the participation to the STREMAH 2009 conference in Tallin, Estonia. Funding for this was provided by the Marie Curie Reintegration Grant PIANO.

Reference:

Karin Hallas-Murila: 20. sajandi Tallinna arhitektuurijuht, Eesti Arhitektuurimuuseum, 2002 ISBN 9985-9400-0-8

Main works include:

Parlament building, Tallin, Herbert Johannson and Eugen Habermann, 1920

House Tompuiestee, Tallin, Herbert Johannson, 1929

Fire brigade, Tallin, Herbert Johannson, Ca. 1935

Assurance building, Tallin, Robert Natus, 1928

House of the artistic association, Tallin, Anton Soans and Edgar Kuusik, 1933

Rauastr, Tallin, Anton Soans, Ca. 1937

Kino Gloria Palace (Vene Draamateater), Vabaduse väljak 5, arch. Fridrihs Skujins (Riia) (1925-26)
Kauplustega elamu, Kinga 6/8 Raekoja plats 8 / Mündi 1,3 / Pikk 12, architect Artur Perna (1923-24), Eugen Habermann (1929-30)
EKA maja (Tallinna Linnavalitsus), Vabaduse väljak 7, arch. Robert Natus (1929-31)
Elu- ja ärihoone, Pärnu mnt. 6, arch. Eugen Habermann (1932-34)
Kunstihoone, Vabaduse väljak 8, arch. Anton Soans, Edgar Johan Kuusik (1933-34)
Koolimaja, Kerutzwaldi 25, arch. Herbert Johanson (1933-35)
Majaomanike Pank, Vabaduse väljak 10, arch. Elmar Lohk (1934-37)
Elu- ja ärihoone, Pärnu mnt. 8, arch. Eugen Sacharias (1936-37)
Tuletoarjehooned, Raua 2, arch. Herbert Johanson (1936-39)
Kino Soprus, Vana Posti 8, arch. Peeter Tarvas, August Volberg (1950-55)
Kirjanike Maja, Harju 1, arch. August ja Heili Volberg (1958-63)
Ärihoone (De la Gardie`kaubamaja), Viru 11-15, arch. Andres Alver, Tiit Trummal, Tarmo Laht (1995-2000)



Austria - Vienna Höfe Photos: M. Bostenaru, 2010.

http://photo.net/photodb/folder?folder_id=994447 and

<https://www.facebook.com/media/set/?set=a.3890541984585.2173575.1310055151&type=1&l=74a1b3c817>

The study trip to Vienna was again in conjunction with the participation in the European Geosciences Union General Assembly, for which a Young Researcher Travel Award was given by the organisers and the funding completed by the Marie Curie European Reintegration Grant.

Literature:

Eve Blau: Rotes Wien: Architektur 1919-1934: Stadt-Raum-Politik, Birkhäuser, 2014

Main works:

Karl Marx Hof, Vienna Heiligenstadt, Karl Ehn, 1925-30



Austria - Vienna housing. Photos: M. Bostenaru, 2010.

<https://www.facebook.com/media/set/?set=a.10202073043530187.1073741866.1310055151&type=1&l=41acab1f81>
http://photo.net/photodb/folder?folder_id=994981

The study trip to Vienna was again in conjunction with the participation in the European Geosciences Union General Assembly, for which a Young Researcher Travel Award was given by the organisers and the funding completed by the Marie Curie European Reintegration Grant.

Literature:

Iris Meder: Open worlds : the Vienna School of Single Family Housing 1910 – 1938, PhD thesis, University of Stuttgart, 2005, available at <http://elib.uni-stuttgart.de/opus/volltexte/2005/2094/>

Main works from the time:

House Stonborough Wittgenstein, Vienna Landstraße, Paul Engelmann / Ludwig Wittgenstein, 1926-28

Workers illness assurance, Vienna Landstraße, Fritz Judtmann / Egon Riss, 1926-27

Haus Moller, Vienna Währing, Adolf Loos, 1927-28
Tension work, Vienna Favoriten, Eugen Kastner / Fritz Waage, 1928-31
House Beer, Vienna Hitzing, Josef Frank / Oskar Wlach, 1929-31
Workers office, Vienna Liesing, Ernst Anton Plischke, 1930-31
Werkbundsiedlung, Vienna Lainz, Josef Frank (leading), 1930-32
Skyscraper Herrengasse, Vienna centre, Siegfried Theiss /Hans Jaksch,
1931-32
Crematorium, Vienna Simmering, Clemens Holzmeister, 1921-23



Netherlands – the Amsterdam of Berlage. Photos: M. Bostenaru, 2009.

<http://www.facebook.com/album.php?aid=2108413&id=1310055151&l=68d871eeda>

http://photo.net/photodb/folder?folder_id=1051134

The study trip to the Netherlands was done in conjunction with the training school of the SemCity (Semantic enrichment of 3D city models) COST action TU0801 for which funding was provided by COST.



Netherlands – Utrecht Rietveld Schröder house. Photo: M. Bostenaru, 2009.
<http://www.facebook.com/album.php?aid=2108414&id=1310055151&l=2808f2cb53>
http://photo.net/photodb/folder?folder_id=1051159

The study trip to the Netherlands was done in conjunction with the training school of the SemCity (Semantic enrichment of 3D city models) COST action TU0801 for which funding was provided by COST.



Romania - Târgu Mureș Secession. Photos: M. Bostenaru, 2009

http://photo.net/photodb/folder?folder_id=991279

The study trip to this city was done as a one day trip in conjunction with the vacation stay in Cluj with no special funding.



Romania – Oradea Secession. Photos: M. Bostenaru, 2009.

http://photo.net/photodb/folder?folder_id=985150

The study trip to Oradea was a vacation trip with no special funding.

References:

Mircea Pasca, *Habitatul oradean la începutul secolului al XX-lea*, Editura Universitatii din Oradea, Oradea, 2008

Mircea Pasca, *Oradea around 1900. An Architectural guide*, Editura Arca, 2010

Mircea Pasca, *Palatul Episcopal Greco-Catolic din Oradea*, Editura Muzeului Tarii Crisurilor, 2009

Mircea Pasca, *Arhitectul Frigyes Spiegel la Oradea*, Editura Arca, 2010

Mircea Pasca, *Palatul Ullmann*, Tipo MC, 2005

Mircea Pasca, *Arhitectii József si Laszlo Vágo la Oradea*, ed. 2-a rev., Editura Arca, 2010

Mircea Pasca, *Palatul Vulturul Negru*, Oradea, Tipo MC, 2007



Romania – Cluj Károly Kós architecture. Photos: M. Bostenaru, 2009 and 2012

<http://www.facebook.com/album.php?aid=2108047&id=1310055151&l=c2e4709092> and

<https://www.facebook.com/media/set/?set=a.4443457127118.2184773.1310055151&type=1&l=ef4edee627>

http://photo.net/photodb/folder?folder_id=1079114

The study trips to Cluj to Károly Kós architecture were vacation trips with no special funding.



Estonia - Tallinn turn of the century. Photos: M. Bostenaru, 2009

http://photo.net/photodb/folder?folder_id=994311

The study trip to Tallin was done as a one day trip in conjunction with the participation to the STREMAH 2009 conference in Tallin, Estonia. Funding for this was provided by the Marie Curie Reintegration Grant PIANO.

Reference:

Karin Hallas-Murila: 20. sajandi Tallinna arhitektuurijuht, Eesti Arhitektuurimuuseum, 2002 ISBN 9985-9400-0-8

Main works:

Kauplustega elamu, Pikk 18, architect Jaques Rosenbaum (1909-10)

(in photo)

Kauplustega elamu, Pikk 23/25, architect Jacques Rosenbaum, ins. Ernst Boustedt (1908-09)

Aadli klubi (Nukuteater), Lai 1, arch. Nikolai Thamm Noorem, Arthur Hoyningen-Huene (1904-07)

Pangahoone, Harju 9, arch. Jacques Rosenbaum, inst Ernst Boustedt (1908-09)

Saksa teater (Eesti Draamateater), Pärnu mnt. 5, arch. Nikolaj Vassiljev, Aleksei Bubor (Peterburi) (1906 (conkurs) – 1910)

Estonia teatri – ja kontserdihoone, Estonia pst. 4, arch. Armas Lindgren, Wivi Lönn (Helsingi), (1910-13), taastud 1944-51 Alar Kotli

Pangahoone-üürimaja, Pärnu mnt. 10, Eliel Saarinen (Helsingi) (1911-12)

Pangahoone, Suur Karja 7, arch. Aleksander Jaron (1911-12)

Kauplustega üürimaja, Viru 4, arch. Karl Burman, Artur Perna (1913-14)

Pangahoone, Suur Karja 1 / Vanaturg 2, arch. Wilhelm Neumann (Riia) (facade), Otto Schott (1902-04), Juurdeehitus (1922-24 Bielenberg & Moser (Berlin))

Pangahoone – üürimaja, Suur Karja 18, arch. Artur Perna (1921-23)

Kauplustega elamu, Pikk 10 / Kinga 10, Ümberehitus 1922-23 Ernst Kühnert

Oleviste gildi (Mustpeade) maja, Pikk 24, Ümberehitus 1919-21 Ernst Kühnert



Finland – Helsinki Art Nouveau. Photos: M. Bostenaru, 2009
http://photo.net/photodb/folder?folder_id=994312

The study trip to Helsinki was done as a one day trip in conjunction with the participation to the STREMAH 2009 conference in Tallin, Estonia. Funding for this was provided by the Marie Curie Reintegration Grant PIANO.

13.3 Trips during the main Marie Curie fellowship



Italy – Milano Giuseppe Terragni architecture. Photo: M. Bostenaru, 2005
http://photo.net/photodb/folder?folder_id=995088

For the buildings of Giuseppe Terragni in Milan several special trips were done from the host city of Pavia to the close city of Milan. Funding was provided by the Marie Curie Intra-European Fellowship with the project CA`REDIVIVUS.



Italy - Milanese Novecento. Photo: M. Bostenaru, 2006

http://photo.net/photodb/presentation?presentation_id=348690

For the buildings of the Milanese Novecento several special trips were done from the host city of Pavia to the close city of Milan. Funding was provided by the Marie Curie Intra-European Fellowship with the project CA`REDIVIVUS.



Italy - Rome Novecento Photos: M. Bostenaru, 2006
http://photo.net/photodb/folder?folder_id=994925

For the buildings of the Rome Novecento a special trip was done in December 2006. Funding was provided by the Marie Curie Intra-European Fellowship with the project CA`REDIVIVUS.



Italy - Como Giuseppe Terragni architecture. Photos: M. Bostenaru, 2005
http://photo.net/photodb/folder?folder_id=994977

For the buildings of Giuseppe Terragni in Como a special trip was done under funding by the Marie Curie Intra-European Fellowship with the project CA`REDIVIVUS, since Como was close to the host city of Pavia.



Italy – Naples Mostra d’Oltremare. Photos: M. Bostenaru, 2006

<http://www.facebook.com/album.php?aid=2024258&id=1310055151&l=e446cc5d45>

http://photo.net/photodb/folder?folder_id=1079120

The study trip to Naples, Italy, took place in conjunction with the 2nd fib Congress which took place at Mostra d’Oltremare. Funding for this participation was provided by the Marie Curie Intra-European Fellowship with the project CA`REDIVIVUS.

Reference:

Pasquale Belfiore e Benedetto Gravagnuolo, Napoli - Architettura e urbanistica del Novecento, 1^a ed., Bari, Laterza, 1994, ISBN 978-88-420-4455-0

Cosenza, E., Manfredi, G., Parretti, R., Prota, A., Verderame, G.M.: Seismic Assessment and Retro-fitting of the Tower of the Nations. In Fédération Internationale du Béton: Proceedings of the 2nd In-ternational Congress June 5-8, 2006 – Naples, Italy, ID 20-11.



Greece - Athens interwar. Photos: M. Bostenaru, 2005.

<http://www.facebook.com/album.php?aid=2022224&id=1310055151&l=af00d70cf4> and

http://photo.net/photodb/folder?folder_id=994457

Study trip to Athens, Greece, took place in conjunction with the 4th EWICS workshop in Thessaloniki in 2005. Funding for this participation was provided by the Marie Curie Intra-European Fellowship with the project CA`REDIVIVUS.

Literature:

Savas Condaratos and Wilfried Wang (eds.) (1999) 20th century architecture. Greece, Prestel (Munich, London, New York), ISBN 3-7913-2152-8

Dennis, Sharp and Catherine, Cooke, "The Modern Movement in Architecture – Selections from the DOCOMOMO registers", 010 Publishers, Rotterdam, 2000

For the works visited the DOCOMOMO registries database was used. The edited book on Greece includes some more school buildings and also the following highlights, from which some have been documented:

Army Share Fund Building, Athens, Vasileios Kassandra / Leonidas Bonis, 1928-38

Apartment building, Ipsilantou and Ploutarchou streets, Athens, Constantinos Kyriakidis, 1933

Small Apartment Block, Athens, Dionysiou Areopatiou str., Vasileios Kouremenos, Ca. 1930

The "Blue" Apartment building, Exarcheia Sq., Athens, Kyriakos Panayotakos, 1932-33

Apartment building, Zaimi and Stournari streets, Athens, Thoukydidis Valentis and Polyvios Michailidis, 1933-34

Apartment blocks for refugees, Alexandras Ave, Athens, Kimon Laskaris / Dimitrios Kyriakos, 1933-35

Rex Cinema, Panepistimiou str., Athens, Vasileios Kassandra / Leonidas Bonis, 1935-37

Apartment block, Navarinou and Mavromichali streets, Athens, Vasileios Douras, 1936

Multistorey car park, Kanari str., Athens, Rennos Koutsouris, 1936-38



Portugal - Lisbon interwar. Photos: M. Bostenaru, 2005

http://photo.net/photodb/folder?folder_id=994458 and

<https://www.facebook.com/media/set/?set=a.4598311078370.2189194.1310055151&type=1&l=b3595025e7>

The first study trip to interwar architecture in Lisbon was done in conjunction with the 250 years anniversary conference of the 1755 Lisbon earthquake for which funding was provided by the Marie Curie Intra-European Fellowship with the project CA`REDIVIVUS. Later on 2 STSM funded by COST led to prolonged stay in Lisbon and more study.

References:

Ana Tostoes, Filipe Jorge, Teresa Nunes da Ponte: Architectural map guide of Lisbon Mapa de Arquitectura de Lisboa, Argumentum, 2003 ISBN 972-8479-12-3

Annette Becker, Ana Tostoes, Wilfried Wang: Architektur im 20. Jahrhundert, Bd.3, Portugal, Prestel, Munich, 1997, ISBN-13: 978-3791319100

Main works:

1935 Block of flats, Avenida de Alvares Cabral 44-48, Casiano Branco

1934-36 Hotel Victoria, Avenida da Liberdade, Casiano Branco

1935 Bloc of flats, Rua Nova de Sao Mamede 3a-9a, Casiano Branco

1938 Nosa Senhora de Fatima church, Porfirio Pardal Monteiro



Hungary - Budapest Secession. Photos: M. Bostenaru, 2003
http://photo.net/photodb/folder?folder_id=994309

The study trips to Budapest Secession architecture were done during the return trip from the SEEE conference in Skopje, Macedonia for which funding was provided by Graduiertenkolleg „Naturkatastrophen” (DFG).

A short film with a central place on this architecture will be provided at
<https://www.youtube.com/user/mbostenaru>

References:

Ákos Moravánszky: Die Architektur der Donaumonarchie (Budapest: Corvina; Berlin: Ernst & Sohn, 1988).

Ákos Moravánszky: Die Erneuerung der Baukunst. Wege zur Moderne in Mitteleuropa (Salzburg, Wien: Residenz Verlag, 1988)



Austria - Vienna Secession. Photo: M. Bostenaru, 2004

http://photo.net/photodb/folder?folder_id=994448

The study trips to Vienna took place as the participation to the European Geosciences Union General Assembly, as this moved to Vienna after Nice.

Literature:

Annette Becker, Dietmar Steiner und Wilfried Wang (eds.) Architektur im 20. Jahrhundert. Österreich, Prestel (München/New York)

Including:

- Stadtbahn pavillon, Karlsplatz, Vienna, Otto Wagner, 1899
- Metro stations, Vienna, Otto Wagner, 1894-1900
- Secession building, Vienna centre, Joseph Maria Olbrich, 1897-98
- Church St. Leopold, Vienna-Penzing, Otto Wagner, 1902-07
- Postsparkasse, Vienna, Otto Wagner, 1903-06
- Church at Steinhof, Vienna, Otto Wagner, 1906
- Block of flats, Neustiftgasse 40, Vienna, Otto Wagner, 1910-12
- House at Michaelisplatz, Vienna, Adolf Loos, 1909-11
- Siedlung Heuberg, Vienna, Adolf Loos, 1912
- Winarsky Hof, Vienna, Josef Frank, 1924
- House Wildbrandtgasse 3, Vienna, Josef Frank, 1914

Housing and shops building Portois&Fix, Ungargasse 51-53, Vienna, Max Fabiani, 1899-1900

Zacherl House, centre, Vienna, Joze Plecnik, 1903-05

Holy Spirit Church, Ottakring, Vienna, Joze Plecnik, 1910-13

13.4 Earlier trips



Romania - Bucharest Duiliu Marcu architecture. Photo: M. Bostenaru, 2000. http://photo.net/photodb/folder?folder_id=994297

The study trips to Modernist architecture in Bucharest took place during the travel for the SFB 461 building survey in April 2000, funded by the DFG.



Romania - Bucharest Horia Creanga architecture. Photo: M. Bostenaru, 2000 http://photo.net/photodb/folder?folder_id=994934

The study trips to Modernist architecture in Bucharest took place during the travel for the SFB 461 building survey in April 2000, funded by the DFG.



Romania - Bucharest Marcel Iancu architecture. Photos. M. Bostenaru 2000
http://photo.net/photodb/folder?folder_id=994206

The study trips to Modernist architecture in Bucharest took place during the travel for the SFB 461 building survey in April 2000, funded by the DFG.



Germany – Avantgarde: Karlsruhe, Stuttgart, Potsdam. Photos: M. Bostenaru, 2002.

http://photo.net/photodb/folder?folder_id=995147

<https://www.facebook.com/media/set/?set=a.10200466509927851.2204280.1310055151&type=1&l=7906eecb64>

A film with Weißenhof Siedlung and a film with Einsteintower, Potsdam will be made available at <https://www.youtube.com/user/mbostenaru>

The study trip to Weißenhof Siedlung took place during the XXI UIA Congress, Resource Architecture, at the pre-congress meeting on Modern architecture in Stuttgart in 2002.

Study trip to Einstein tower, Potsdam, took place with the excursion of the Graduiertenkolleg „Naturkatastrophen“ 450 also in 2002.

The views of Dammerstock Siedlung in Karlsruhe were renewed during the stay in Karlsruhe 1996-2006. 2013 during the NeDiMAH stay a guided tour was done subject of another album.

Funding was provided by the Graduiertenkolleg „Naturkatastrophen“ (DFG).

References:

Einstein tower – book review at

http://bostenaru.natkat.org/project_results/bookreview_einstein.html

(funded by PIANO reintegration grant) – also in this book as a chapter
CD ROM Weiße Vernunft – review on Amazon

<http://www.amazon.de/exec/obidos/ASIN/3791321242/>

Winfried Nerdinger and Cornelius Tafel (1996) *Architekturführer Deutschland. 20. Jahrhundert*, Birkhäuser Verlag (Basel, Berlin, Boston), ISBN 3-7643-5287-6

Romana Scheider, Winfried Nerdinger und Wilfried Wang (eds.) (2000) *Architektur im 20. Jahrhundert. Deutschland*, Prestel (München/New York), ISBN 3-7913-2293-1

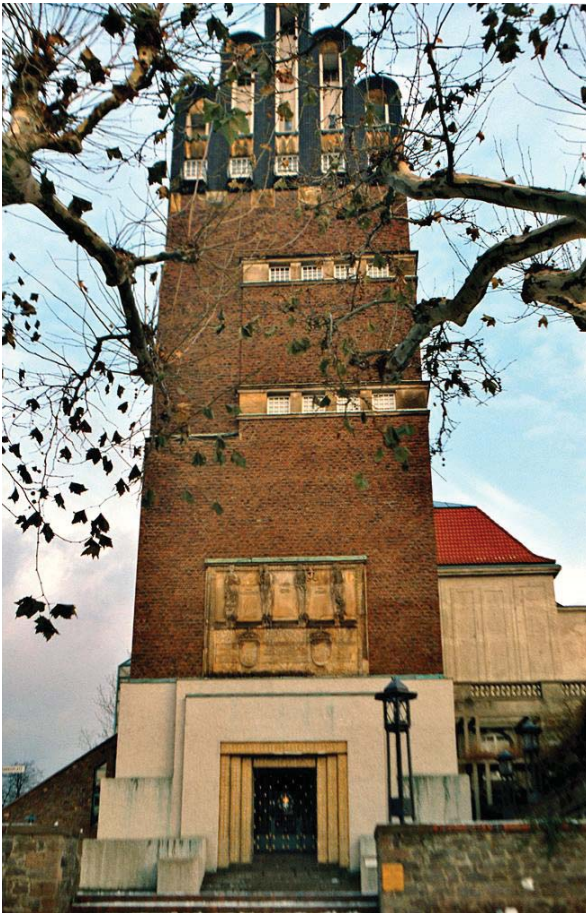
Main works visited:

Siedlung Römerstadt, Frankfurt am Main, Ernst May, 1925-30

Weißenhofsiedlung (Jacobus Johannes Pieter Oud – Reihenhäuser, Josef Frank – Doppelhaus, Mies van der Rohe, Le Corbusier), Stuttgart, 1925-27
Deutscher Pavillon, World exhibition Barcelona 1929, Ludwig Mies van der Rohe

Zeche Zollverein XII, Essen Katernberg, Fritz Schupp and Martin Kremmer, 1927-32

Hauptbahnhof Leipzig, William Lossow / Max Hans Kühne, 1902-15



Germany - Darmstadt Jugendstil at Mathildenhöhe. Photos: M. Bostenaru, 1999. http://photo.net/photodb/folder?folder_id=994687

The study trip to Mathildenhöhe was done during the architecture internship in the Kramm & Strigl studio, 1998-1999.

A film will be made available at <https://www.youtube.com/user/mbostenaru>

Hochzeitsturm und Ausstellungsgebäude, Darmstadt Mathildenhöhe, Joseph Maria Olbrich, 1905-08



Sweden – Woodland Cemetery. Photos: M. Bostenaru, 2004

http://photo.net/photodb/folder?folder_id=10

The study trip to Sweden was done during the first EuroScience Open Forum, 2004, for which funding was provided by the Marie Curie Fellows Association.

Literature:

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Visited:

Woodland cemetery, Stockholm, Gunnar Asplund/Sigurd Lewerentz, 1915-40 (in image)

Stokholm city hall, Ragnar Östberg, 1902-23

The street Kungsgatan, Stockholm, Sven Wallander, Ivar Callmander, Ernst Stenhammar, Cyrillus Johansson etc., 1915-33

More landmarks:

Train stations, Stockholm-Västeras-Bergslagen, Erik Lallerstedt, 1900-07

Adolf Fredriks Norra Folkskola, Stockholm, Georg A Nilsson, 1898-1902
Stadion, Stockholm, Torben Grut, 1909-12
Villa Geber, Diplomstaden, Stockholm, Ragnar Östberg, 1911-13
Engelbrektskyrkan, Stockholm, Lars Israel Wahlman, 1905-14
Liljevalch artistic hall, Stockholm, Carl Bergsten, 1913-16
Stokholm Enskilda Bank, Stockholm, Ivar Tengbom, 1912-15
Svenska Tändsticksaktiebolaget, Stockholm, Ivar Tengbom, 1926-28
City library, Stockholm, Gunnar Asplund, 1918-28
Stockholm exhibition 1930, Gunnar Asplund etc.
Row housing, Alstensgatan, Bromma, Stockholm, Paul Hedqvist, 1932
Community housing, John Ericssonsgatan 6, Stockholm, Sven Markelius,
1935
The Lyceum at Sveaplan, Stockholm, Nils Ahrbim / Helge Zimdal, 1936

Wroclaw, Poland

This study trip was done in conjunction with the building survey in Myslakowice, Poland, for which funding was provided by the University of Karlsruhe. Unfortunately the photographs were lended and not given back.

Main works:

Century hall, Wroclaw, Max Berg, 1911

Shop and office building in the Junckern str., Wroclaw, Hans Poelzig, 1911

House on the art industry exhibition, Wroclaw, Hans Poelzig, 1904

Department store Petersdorf, Wroclaw, Erich Mendelsohn, 1926-27

House in Stifter str., Wroclaw, Adolf Rading, 1921-22

Reconstruction of the Mohren farmacy, Wroclaw, Adolf Rading, 1925

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