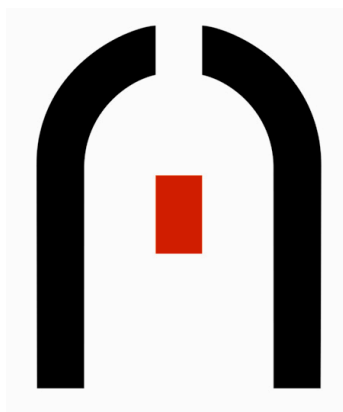


# FACULTY OF ARCHITECTURE



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# RESEARCH CENTRE IN ARCHITECTURE AND URBAN DESIGN

## GENERAL PRESENTATION

The concept of sustainable urban development is nowadays a new dimension of the urban design. It involves in an integrated way different levels of the society in the planning of the new urban areas in connection with the historical protected zones. This tendency is part of the specific contemporary answers to the globalization challenges. The relation between the built heritage and the development of the cities make necessary a good knowledge of the urban history, of the society evolution and of all tendencies in the contemporary urban development.

Architectural form is another research topic considering the basic fundamentals of today's man made environment in relation with nature. The possibilities to adapt already existing tendencies to contemporary phenomena related to technology and digital techniques, but also with ecology, are known as sustainable (self sustained) development. In this kind of approach form is both a generating source and final result, dominating architectural design.

### OBJECTIVES

The main objective of the research is to find the characteristics of the urban development and the particularities of the city zones and ensembles. Based on the analysis, another preoccupation is to propose viable solutions for the urban planning in the same time with the integration and the rehabilitation of the built heritage.

The study of the characteristics of the contemporary architecture and its development tendencies in order to propose suitable solutions for the design of the built environment is another main objective of the researchers.

There is also important to find how the contemporary architecture may be inserted in the existing natural and built sites and how could it to transform them in the benefit of their quality.

## MAIN RESEARCH FIELDS

- History of urbanism and its applications in contemporary design.  
*Keywords:* urban design, urbanism, settlement, city, evolution

- Urban analysis and planning. Urban studies for sustainable development.

*Keywords:* urban areas, territory, sustainable development, urban network

- Integrated protection of the historical zones in a sustainable urban development.

*Keywords:* built urban areas, historical zones, sites and zones, rehabilitation

- Historical and critical evaluation of modern architecture.

*Keywords:* space, functionalism, modular, environment, typology

- Characteristics of the Architecture in the second half of the 20th century

*Keywords:* modernism, geometric shape, international style, rationalism.

- Forms, symbols and representation methods.

*Keywords:* symbol, architectural form, geometry, art, alternative form

## Researches in SUSTAINABLE TERRITORY DEVELOPMENT

### FIELD DESCRIPTION

The laboratory proposes an integrated approach on urban development through integrated urban development programs for the city as a whole and to define realistic development goals for the urban area and a vision for the treatment of the city. These principles integrate the three main converging directions of research: spatial development, territorial planning and sustainable development which permit a holistic approach, needing knowledge from the architectural, planning, constructions and construction materials, energetic and telecommunication, restoration, natural and constructed patrimony conservation, transportation, social mobility, economic development, hydromechanics, natural environment protection domain, etc.

This research field is important to create and provide high quality public spaces, to modernise the infrastructure network and to rise the energetic efficiency, to promote a cheap and efficient urban transportation system

**ACTIVITIES**

Researches to give solutions for the complex needs of the urban system in order to propose the territorial urbanization respecting the ecological criteria.

Solutions to find new directions of acting at the urban level.

Realization of studies of territorial urbanization and different categories of urban plans.

Urban plans used by the local administration for the development of settlements and territory.

Territorial development plans (PATN, PATJ, PATZI), general development plans (PUG), area development plans (PUZ), area rehabilitation, restoration and re-functioning.

Consultant and technical expertise in territorial development

Projects of landscape design.

**RESEARCH TEAM**

Prof.dr.arh. Teodor Octavian Gheorghiu

Prof. Dr. arh. Smaranda Bica

Assoc. prof.dr.arh. Radu Radoslav

Ass. Arh.Tudor Morar

Ass.Arh. Ana Branea

Arh. Marius Gaman

**RESULTS****PUBLISHED PAPERS**

1. Radoslav, R., *Spațiu Public, Element Cheie în Administrarea Orașului*, in „Urbanismul” – New Serie Nr. 9/2011, Bucharest, ISSN 1844-802X, pp. 90-95.
2. Gheorghiu, T., O., *Episod urbanistic la inceputurile timpurilor moderne sud-est europene: sistematizarea rurală în Banatul sec. XVIII-XIX*, in „Urbanismul” - New Serie, 7-8, 2010-2011, ISSN 1844-802X, pp 17-22.
3. Radoslav, R., *Rehabilitation through a Holistic revitalization Strategy of Historical City Center- Case Study Timisoara, Romania*, BENA Conference „5th International Congress on “ Science and Technology for the Safeguard of Cultural Heritage in the Mediterranean Basin, Istanbul”, Conference Papers: Science and Technology for the Safeguard of Cultural Heritage in the Mediterranean Basin, ISBN 978-88-905639-3-5, pp. 281-294.
4. Morar, T., Radoslav, R., *Sustainable Urban Development through Local Communities Strengthening*, in „Eficient Infrastructures for Terrestrial Transport”, ISSN 2247-3807 ISSN-L=2247-3807, pp. 122-129.

**CONTRACTS****INTERNATIONAL PROGRAMMES**

1. COST: TU 0701, project: *Improving the quality of suburban buildin stock.*

Beneficiary: EU RTD FRAMEWORK PROGRAMME

Partners: Faculty of Architecture - University of Ferrara, Ministry of Environment - Finlanda, Porto University - Portugalia, The Council of Timisoara

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**Researches in HISTORY OF URBANISM  
AND ITS APPLICATIONS IN  
CONTEMPORARY DESIGN**

**FIELD DESCRIPTION**

Historical researches of human settlements in order to detect the rules of urban development.

Studies of urban structures, typologic and morphologic elements, particularities of the urban evolution.

Studies to establish the main principles in urbanplanning.

Studies to detect the relation between the human needs and behaviour and the setting development.

Researches in urban evolution of cities, villages and territory.

Researches in architectural and urban history of the evolution of cities and villages in the western side of Romania.

Researches to detect the characteristics of the architecture in the western part of Romania during the three last centuries.

**ACTIVITIES**

Archives investigations, research in the territory, analytical studies.

Inventory of the valuable architecture in Banat in order to propose methods of their integration in the contemporary life.

Solutions to increase the quality of urban projects. Studies for an inventory of protected areas.

Historical urban studies for the projects of urban planning.

**RESEARCH TEAM**

Prof.dr.arh. Teodor Octavian Gheorghiu

Ass.arh.Catalina Bocan

Ass. Arh. Mirela Szitar

Ass.arh. Cristian Blidariu

**RESULTS****BOOKS**

1. Gheorghiu, T., O., *Extracarpatian Romanian Urbanism in the XIXth Century, between Tradition and Modernity. Some Case Studies*, ed. Universităţii « Al.I.Cuza » Iaşi, 2011, 978-973-703-719-0.

**PUBLISHED PAPERS**

1. Gheorghiu, T.O., *Târguri și mici orașe medievale din sud-estul României și relația lor cu mediul natural*, in „Historia Urbana” tom XIX, ISSN: 1221-650X, pp. 3 -25.
2. Szitar, M., Grecea, D., S., *Sustainable building assessment tools and the quality of the built environment* in COST C25 Final Conference „Sustainability of Constructions – Integrated Approach to Life-time Structural Engineering – Towards a better built environment” – 03-05 Februarie 2011, Innsbruck, Austria , in “Proceedings of the International Conference Sustainability of Constructions: Towards a Better Built Environment, Innsbruck, 2011”, ISBN 978-99957-816-0-6, Valletta: University of Malta, 2011 pp. 155-163.
3. Grecea, D., Szitar, M., „ *Politics for sustainable development – key documents*, In COST C25 Final Conference „Sustainability of Constructions – Integrated Approach to Life-time Structural Engineering – Towards a better built environment” – 03-05 Februarie 2011, Innsbruck, Austria , in “Proceedings of the International Conference Sustainability of Constructions: Towards a Better Built Environment, Innsbruck, 2011 ISBN 978-99957-816-0-6, Valletta: University of Malta, 2011, pp.118-125.

**CONTRACTS**

1. *Historical Study of the Town Nădrag, district Timiș, preliminary PUG.*

Value: 12000 RON

Beneficiary: S.C. GEOLINK SRL and The Council of Nădrag

2. *Historical Study of the Ineu Fortress*

Value: 6000 RON

Beneficiary: SC ARTEX SRL

3. *Historical Study of the Șoimoș Fortress*

Value: 4400 RON

Beneficiary: SC ARTEX SRL

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**Researches in HISTORICAL MONUMENTS AND PROTECTION OF THE BUILT HERITAGE****FIELD DESCRIPTION**

Study of the buildings and urban zones with a high architectural and historical value.

Detect the best forms and possibilities of protection. Search for historical monuments and sites in the county of Banat.

Colaboration with institutions and organisations involved in the protection of the built heritage. Study of civil, industrial and vernacular buildings with high architectural and historical value.

**ACTIVITIES**

Archives of information about the buildings and zones of architectural interest – Inventory of historical monuments

Analyse of the damages produced by different causes to historical monuments and sites.

Proposals of rehabilitation and prevention.

Projects of restoration and conservation.

Historical studies for the Territorial development plans (PATN, PATJ, PATZI,), general development plans (PUG), area development plans (PUZ) which contain protected areas.

Expertise of diferents types of damages asked in restoration projects, projects of restoration and conservation.

**RESEARCH TEAM**

Prof.dr.arh. Smaranda Bica  
Assoc.prof.dr.arh. Liliana Roșiu  
Ass.arh. Alfred Schwalie  
Ass. Arh. Mihai Donici  
Ass. Arh. Romeo Szorad

**RESULTS****PUBLISHED PAPERS**

1. Roșiu, L., *Cetatea Aradului - relația cu evoluția și perspectivele de regenerare ale zonei istorice*, in „Transsylvania Nostra”, nr. 3/ 2011, Cluj, , ISSN 1842-5631, pp. 29-36.
2. Gheorghiu, T., O., *The fortifications of Timisoarain Timișoara*, Symposium Forteress once again in use, Alba Iulia-Cluj Napoca, aprilie 2011, ISBN: 978-973-9377-54-6, pp. 121-141.

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**Researches in HISTORICAL AND CRITICAL  
 EVALUATION AND STRUCTURAL  
 BEHAVIOUR OF MODERN ARCHITECTURE**

**FIELD DESCRIPTION**

Study of the sources of modern architecture in relationship with a critical overview of the contemporary urban planning.

Search of the characteristics and qualities of the contemporary architecture and its development tendencies and its relation with the built environment.

Study of the contemporary tendencies of the urban architecture.

Stability studies for steel structures in special conditions.

**ACTIVITIES**

Theoretical contributions to the theory of architecture and in the analysis of the contemporary architectural development.

Projects of architecture.

**RESEARCH TEAM**

Assoc. prof. dr. arch. Vlad Gaivoronschi  
 Assoc. prof. dr. arch. Ioan Andreescu  
 Lect. dr. ing. Ioan Mircea Cristutiu  
 Lect. Dr. ing. Marius Moşoarcă  
 Ass. Arch. Marius Harta  
 Ass. Arh. Bogdan Demetrescu  
 Ass. Arh. Toma Claudiu

**RESULTS****BOOKS**

1. Gioncu, V., *Earthquake engineering for structural design*, Taylor & Francis, 2011,

ISBN13:978-0-415-46533-5(hbk)  
 ISBN13:978-0-203-84889-0(ebk) .

**PUBLISHED PAPERS**

1. Gioncu V., Moşoarcă, M., *A grid for an atrium roof*, in Proceedings of 6th International Conference on Thin Walled Structures. Recent research advances and trends, Volume 2 Timisoara, ISBN:978-92-9147-102-7, pp.905-912.
2. Gaivoronschi, V., “*City Business Centre – Timisoara*”, in Project Baikal” nr. 27/ 2011, ISSN: 3952 33-28-40, pp.100-105.
3. Gioncu, V., *Characteristics of DUCTROT-M computer program for determining the available rotation capacity of steel wide flange beams*, in Pollack Periodica, ISBN: 1788-1994(Print) 1788-3911(Online), pp. 17-36.
4. Moşoarcă, M., Gioncu, V., Cosma, O., *Seismic Behaviour of religious historical buildings on domes and pendentives* in Buletinul Stiintific al Universitatii Politehnica din Timisoara, Seria Constructii-Arhitectura, Tomul 55(69), Fascicola 1, Timisoara, ISBN: ISSN 1224-6026, pp. 44-53.
5. Anthimos, A., Mosoarca. M., Gioncu, V., *Local ductility of rolled steel beams* in Proceedings EUROSTEEL 2011, 6th European Conference on Steel and Composite Structures, Volume B, Budapest, Hungary, 2011, ISBN: 978-92-9147-103-4; pp. 1185-1190.

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