



June 13-17
2016
Prague, Czech Republic

WMCAUS 2016

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WORLD MULTIDISCIPLINARY CIVIL ENGINEERING - ARCHITECTURE - URBAN PLANNING SYMPOSIUM

Eco-friendly Symposium - WMCAUS



ABSTRACT COLLECTION BOOK

*the more you save the Earth
the more you get wealth*

World Multidisciplinary Civil Engineering-Architecture-Urban Planning Symposium - WMCAUS

WMCAUS 2016

13-17 June, 2016 - Prague (Czech Republic)

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Preface

This Abstract Collection consists of the abstracts of papers presented in the "World Multidisciplinary Civil Engineering-Architecture-Urban Planning Symposium" in the city of romance Prague (Czech Republic) during 13-17 June 2016. The World Multidisciplinary Civil Engineering-Architecture-Urban Planning Symposium (WMCAUS) aims to provide a forum for discussion of the latest findings and technologies in different fields of Civil Engineering, Architecture and Urban Planning, to give opportunities for future collaborations, to be a platform for sharing knowledge and experiences in the fields of Civil Engineering, Architecture and Urban Planning, to lead for providing a forum for early career researchers for presentation of their work and discussion of their ideas with experts in different fields of Civil Engineering, Architecture and City and Urban Planning such as; Construction Management and Engineering, Construction Materials, Geotechnics, Hydromechanics, Structural Engineering, Building Performance Simulations, Transportation, Architectural Space, Social Sciences and Architecture, Architectural Culture, Theories of Vision and Visuality, Architectural Design and Methods, Architectural Historiography, Architectural Heritage and Conservation of Historical structures, Sustainability in the Built Environment, Urban Planning, Public Space, Urban Design, Theories and Methods, Regional Planning, Archaeological Method and Theories, Sustainable Urban Development, Urban Sociology, Economics and Politics, Risk Management and Mitigation Planning, GIS-Based Modelling for Mitigation Planning, Computer Aided Design, Mathematical and Statistical Methods, Integrated Coastal Zone Planning and, Management, Accreditation of Civil Engineering, City and Regional Planning Education.

However the idea of organization of WMCAUS is quite old, the 1st WMCAUS was organized this year. WMCAUS 2016 will be one of the Annual series. However, nowadays there had been many local or international meetings related to Civil Engineering, Architecture, Urban Planning Sciences, we decided to organize a traditional style of symposium, friendlier and very fruitful alternative world symposium which is not a festival-like super-large convention, too chaotic and busy to have a chance to discuss something in deeper with other participants.

The main mission of the "World Multidisciplinary Civil Engineering-Architecture-Urban Planning Symposium - WMCAUS" is to lead to contribute in multidisciplinary studies related with Civil Engineering, Architecture, City and Urban Planning and to improve interactions between people within these fields. As another mission it will provide a forum for this diverse range of studies which report very latest results and document emerging understanding of the related systems and our place in it.

We would like to express our sincere gratitude to all 500+ participants of WMCAUS 2016 from 50+ different countries all over the world for their interests and contributions in WMCAUS 2016. We wish you enjoy the World Multidisciplinary Civil Engineering-Architecture-Urban Planning Symposium – WMCAUS 2016 and have a pleasant stay in the city of romance Prague. We hope to see you again during next event WMCAUS 2017 which will be held in Prague (Czech Republic) approximately in the similar period.

Prof.Dr. Işık YILMAZ
 Assoc.Prof.Dr. Marian DRUSA
 Prof.Dr. Marian MARSCHALKO

Chairmen of WMCAUS 2016

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Mansard roof, attics and garrets and the convenience of investment in order to contain land consumption

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ABSTRACT

The enhancement of mansard roof, attics and garrets is a prominent element in the real estate market and it is going to become increasingly important. The problem of land consumption leads to make use of building spaces that are already available such as attics and lofts; furthermore, in the main Italian cities new planning regulations offer the possibility to increase the building volume in case of energy refurbishment. The research, carried out by Politecnico di Milano, analyses innovative architectural solutions in the enhancement of mansard roof and the convenience of investment in this field compared to other real estate asset classes in order to contain land consumption. The aim is to identify: a. best practices (both new construction and refurbishment of attics), b. the intervention costs, c. the market value of the recovered space (loft or attic) in relation to other units of the building. The research is divided into the following phases: 1. Overview of the Italian attics market. This part presents the state of art of the Italian housing market in relation with the opportunity and convenience of the attics refurbishment. In particular, the market analysis (size, cost, time of sale, etc.) shows the comparison among different geographical areas (regions, provinces, city centres, suburbs). 2. Search for innovative design solutions and analysis of best practices. 3. Investment convenience in lofts and attics refurbishment compared to other types of investment in urban regeneration projects. For this purpose, about 200 designers working on the entire national territory and some major players in the Italian Real Estate market were interviewed. The data demonstrate that the attics express the highest values per square meter in the Italian residential market. Furthermore, the research shows that a family that wants to invest in an attic may realize a significant gain if they decide to refurbish and sell the property in a short time. The research tries to raise operators' awareness in order to limit the land consumption, to improve existing buildings, to revitalize cities and the historical centres.

Key words: Loft valorization; garrets; land consumption; refurbishment cost; market value; residential market.

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