

Contents

Foreword.....	III
Contents	V

SUSTAINABLE REFURBISHMENT

The Hron Metalworks in Sv. Kríž Nad Hronom – An Example of a Socialistic Industrial Town	3
<i>Tereza Bartošíková</i>	
A Sustainable Retrofit for Low Rise Prefabricated Concrete Blocks	12
<i>Cătălina Bocan</i>	
The Development of Active Buildings through Renovation – Is it Possible?	22
<i>Mehmet Börühan Bulut, Fredrik Wallin</i>	
Strategies for Urban Development of Bucharest City Center.....	32
<i>Alina Florentina Burlacu, Elena Otilia Târîță-Cîmpeanu</i>	
A Methodology for Refurbish the Social Housing Heritage.....	41
<i>Lucia Castiglioni</i>	
Guidelines for a Sustainable Rehabilitation Methodology for 19th Century Urban Buildings in Northern Portugal	51
<i>Ana Carolina Coelho, Jorge Manuel Branco, Helena Gervásio</i>	
Sustainable Planning for Metropolitan Cities: The Case of Abandoned Railways Yards in Milan.....	61
<i>Adriana Granato</i>	
Urban Block Ecosystem Refurbishment	69
<i>Lucie Kirovová</i>	
A Decision Support Tool for the Adaptive Reuse or Demolition and Reconstruction of Existing Buildings	79
<i>Aikaterini Moutsatsou, Eleni Sfakianaki</i>	
Improvement of the Energy Efficiency of a Portuguese University Building.....	89
<i>Lúisa Dias Pereira, Nelson Soares, Pedro Conceição, João Pedro Ferreira, Patrícia Pereira da Silva</i>	
Renovation of Elementary School in Brno – Balance of Environmental Impacts ..	99
<i>Zuzana Stránská, Petr Jelínek, Karel Struhala, Jiří Sedlák</i>	
Prague Vyšehrad Station – The Story	109
<i>Zdeněk Šimoník</i>	

SUSTAINABLE SPATIAL PLANNING

Wood-Based Panel for Modular and Sustainable Single-Houses	115
<i>Eliana Pereira, Ana Carolina Coelho, Jorge Manuel Branco</i>	
Prediction of Environmental Noise Levels Caused by Road Traffic in Urban Area	123
<i>Jan Slechta</i>	
Urban Architecture	133
<i>Lucia Štefancová</i>	
Design Principles for the Street Connectivity of New Urbanist Projects	143
<i>Elena Otilia Tăriță-Cimpeanu, Alina Florentina Burlacu</i>	

LOW-TECH AND HIGH-TECH SOLUTIONS FOR BUILDINGS

Feasibility of the Introduction of Titanium-Based Materials for the Façade	155
<i>Irene González Morán, Francisco Fernández Martínez</i>	
Architectural Design for NZEB Office Buildings	163
<i>Serena Miceli</i>	
Prefabricated Timber-Concrete Composite Floors	173
<i>Pavel Nechanický</i>	
Properties and Tests of Recycled Aggregates Used in Concrete	182
<i>Tereza Pavlů, Luc Boehme</i>	
Improper Solid Waste Management Increasing Material Consumption in Buildings: A Case of any Indian Society	192
<i>Himanshu Poptani</i>	
Energy Efficiency of Buildings with Passive Thermal Energy Storage Systems with PCMs	202
<i>Nelson Soares, J. J. Costa, A. R. Gaspar, P. Santos</i>	
Bionic Façade Inspired by Vertical Greenery Systems	212
<i>Tomaž Šuklje, Boris Vidrih, Ciril Arkar, Sašo Medved</i>	

BUILDING DESIGN AND OPERATION

Exergy Performance as a Measure of Building Efficiency	223
<i>Lorenzo Leoncini, Marta Giulia Baldi</i>	
Interplay Climate-Human-Building: User Friendly Planning Tools for New Challenges in Building Design	232
<i>Petra Liedl, Atila Novoselac, Barbara Brown Wilson, Matt Fajkus</i>	

The City – Two Strategies of Sustainability	242
<i>Peter Morgenstein, Ján Legény</i>	
Design of a Zero-Heating-Energy-Hotel	252
<i>Kathleen Schwabe, Manuela Walsdorf-Maul, Falk Schaudienst, Frank U. Vogdt</i>	
Retrofitting and Monitoring Systems for Existing Building Structures	262
<i>Daniel Nicolae Stoica</i>	
Transitioning to Smart Grids: A Preliminary Case for Regional Roadmaps	272
<i>Kristina L. Tajchman</i>	

LIFE CYCLE SUSTAINABILITY ASSESSMENT OF BUILDINGS

Life Cycle Assessment of Concrete Blocks Masonry: Processes Contribution Analysis	279
<i>Cristiane Bueno, João Adriano Rossignolo, Aldo Roberto Ometto</i>	
Performance Oriented Building Assessment: A Decision-Support Method Based on an Integrated Approach	289
<i>Carmen Gargiulo</i>	
Influence of System Lifetime on Environmental Impact Assessments of Photovoltaic Systems in Buildings	299
<i>Clara Good</i>	
LCA Database in the National Context	309
<i>Julie Hodková</i>	
The Influence of Structural Design on the Sustainability Assessment of Building Constructions	317
<i>Julia Maydl</i>	
Sustainability Rating Systems for Buildings: A New Methodological Proposal....	327
<i>Roberta Moschetti</i>	
Environmental Impact Comparative Analysis between Composite and Traditional Materials	337
<i>Olimpia Iuliana Nicolae, Alexandru Dimache, Iulian Iancu, Ioan Bica</i>	
Sustainability Indicators for the Preliminary Energy Design of Office Buildings..	347
<i>Ernesto Efrén Velazquez Romo, Jean-Pierre Nadeau, Denis Bruneau, Philippe Lagiere</i>	
Author Index	i