GDC 2017

3nd Green Design Conference

UNIVERSITY OF TWENTE.

BAMB

SARAJEVO GREEN DESIGN FOUNDATION

Invitation

On behalf of Organizing Committee we are pleased to invite you to take part in the Third International Green Design Conference (GCD2017) on Green Cities, Buildings and Products that will take place in Mostar (Bosnia and Herzegovina) from 07 October- 07 October 2017 as a part of International Green Design Biennale (a seventh international Green Design event in Bosnia and Herzegovina.
The deadline for submitting abstracts is 17 of August 2017.
We invite everyone - academics as well as private and public parties from the industry and market - to join us in exploring and celebrating green solutions that will ensure a bountiful future for all.

The conference is organized in collaboration with **EU Horizon 2020 'Buildings as Material Banks**' Project and aims at addressing the many inter-related aspects of green design of cities, buildings and products, from urban strategies to social cohesion, design for reconfiguration and reuse design for change, sustainable energy strategies.

It is estimated that over 50% of the world's population now lives in cities and urban areas. According to the UN Habitat, that is set to rise to 60% in a couple of decades. These large communities provide both challenges and opportunities for green design of built environments. Cities are responsible for around 65 percent of all energy used, 60 percent of all water consumed and 70 percent of all greenhouse gases produced worldwide. The exponential increase in population and contemporaneous increase in standard of living for many, will mean that the demand for essential goods & services (transportation, cars, planes, housing, materials, water and food) will increase by at least a factor of 2 in the next few decades.
A report by the World Resource Institute predicts a 300% rise in material use, as world population and economic activity increases over the next 50 years. Raw materials supplies are gradually diminishing and becoming more expensive, landfill sites are filling up resulting in increased disposal fees and making the waste management expensive.

The complex systemic and multi-scalar capacities of cities provide massive potential for a broad range of positive interactions with natural ecosystems.

www.greendesignconference.com www.sarajevogreendesign.com www.bamb2020

Emphasis of the conference

While there is an exponential growth in population, there is decline in the resources necessary to sustain this population due to the existing global industrial systems. The emphasis of the conference is on innovative design and engineering methods that will contribute to the process of redefining the quality of life in cities and rethinking the way we create, make and use artifacts and resources that will enable circular economy and circular built environment.

This subject integrates issues from green cities, transformation of cities, mobility to spatial adaptability and flexibility of building systems, heritage and transformation of existing urban fabric, up to material productivity, bio based construction and energy saving. As such, this is a concept that can integrate research themes from transformation of cities and buildings *"function neutral buildings", flexibility, "customization of industry"*, *"supply driven design"* to *"design for reconfiguration, reuse and disassembly"*, development of policy regulations and standards aiming at reducing use of virgin materials and, development of circular business models and assessment tools and methods, that will support recovery and reuse of materials.

Development of the research agenda with respect to this topic deals with issues such as, life cycle performance of buildings, design methodology and protocols for reversible buildings / buildings as material banks, systems development, reuse, renewable materials, 3D manufacturing, and development of performance measurement tools.

This subject integrates issues that range across green city design, models of mobility and infrastructure that will reduce emissions of greenhouse gases, noise and pollution, adaptability and flexibility of buildings and building systems to extend their life cycle and recover materials for reuse, C2C (Cradle to Cradle), green products, material stewardship through design for re-manufacturing, up-cycling and energy saving.

Conference Themes:

1. Reversible Buildings
2. Green Materials and Technologies
3. Transformable and Green Buildings
4. Green Cities
5. Building Information Modeling
6. Social Cohesion and Cultural Continuity
7. Mobility and Infrastructure
8. Urban Landscaping and Farming
9. Smart Energy Solutions
10. Green Financial, Policy and Regulatory Standards

Reversible Buildings

The conventional way of construction has become a burden to the dynamic and changing society of the 21st century. Developers and real estate managers warn that there is a mismatch between the existing building stock and the dynamic and changing demands with respect to the use of buildings and their systems.

The physical impact of increasing building mass in industrialized nations and developing world has become undeniable in 21st century. The appetite for raw materials and landfill sites, as well as acceleration of the changing demands by users clearly indicates that a fundamental change in the way buildings are designed and constructed is needed.

- Strategies for design of reversible buildings
- Design for disassembly strategies;
- Design support tools for design of reversible buildings and systems
- New value proposition of design for reversibility, presented through case studies
- Environmental and economic impacts of design for high reuse potential

Green Materials and Technologies

When developing specifications, building or product descriptions and standards a broad range of environmental factors should be considered by architects and designers such as: waste prevention, recyclability, the use of recycled content, the use of environmentally preferable and bio-based products, life-cycle cost, and ultimate disposal.

- Design for reuse of existing buildings, products, and equipment
- Design for zero waste
- Design for high reuse potential of buildings and building elements
- Innovative business models around circularity of resources
- Design for reconfiguration of buildings and building systems
- Environmental assessment and measurement tools for green buildings and products
- Life cycle design strategies
- Reversed logistics
- C2C strategies
- Green manufacturing processes
- Management mechanisms that support system, component and material reuse

Transformable Buildings

Very often buildings are seen as finished and permanent structures. They are carefully designed around short-term predictions of building use. As a result those buildings have a long physical lifespan, but do not offer the flexibility to maximize their functional lifespan. For that reason, parts of such fixed building structures or whole buildings have to be broken down, in order to be changed, adapted, upgraded, or replaced (Durmisevic, 2006). Some buildings are demolished because their technical characteristics have deteriorated. Most buildings, however, are demolished because they do not satisfy the needs of their users. Conventionally, the technical and functional service life of a modern building is approximately 50-75 years. Yet, today buildings with an age of 20 years are demolished to give way to new construction.

- Transformable and Flexible Buildings
- Design for Adaptability
- Design for Reconfiguration of Buildings and Systems
- Case Projects and Pilots
- Assessment Transformation Models

Energy solutions

The risks of worldwide climate change are forcing new challenges upon our society, arguably the most important being to reconceive the way we consume and produce the energy that we need. These challenges can only be met by radical innovations in the field of research and technology. In the context of ongoing population growth and urbanization, the integration of renewable energy sources into urban energy networks and the increase in energy efficiency of cities are the key challenges that need to be addressed in the near future.

- Renewable Energy Systems
- Sustainable Energy and the City
- Intelligent Environments and Emerging Technologies
- Smart Grids
- Green Energy Concepts
- Case Projects

Urban landscaping

Urban landscaping will play a key role towards reintegration of human settlements within a logical framework of natural eco systems. It will deal with issues as reducing heat island effects, quick water absorption during heavy rain showers to prevent immediate flooding, more localized food production in built up areas, absorption of CO2, and cleaning of wastewater within the urban parks and improvement of the micro climate and air quality in general within cities.

- Urban Landscape Planning and Design
- Urban Farming
- Microclimate Design in Cities
- Case Studies
- Integration of Elements of Urban Landscaping into Building Systems

Green Buildings and Architecture

Building sector accounts for about 50% of global greenhouse gas emissions (UNEP-IETC, 2002). That makes it the largest single contributor to greenhouse gas emissions globally. In many countries the construction industry accounts for up to 40% of materials entering the global economy (CIWMB 2000), 50% of waste production, and 40 % of energy consumption.

Green buildings need to employ concepts and technologies that will increase their future value and require special, products, materials, and energy systems. Furthermore, a symbiotic relationship between buildings and the urban fabric they create and occupy is an essential condition for a green architecture.

- CO_2-balanced Buildings
- Bio based buildings
- Bioclimatic Architecture
- C2C Building Strategies
- Open Building Systems
- Life Cycle Design of Building
- Case Studies
- Prefabricated, Sustainable and Flexible Buildings

Green Cities

Cities are at the epicenter of a global shift of population from rural to urban settings. They are the powerhouses of the global economy and contribute centrally to knowledge production and innovation. The future of cities will therefore be a defining element of the global future.

The ideal model of a green city will require a balanced relationship between socio-cultural dimensions of the city design (including architectural design as a cultural product, considering the delicacy of cultural heritage issues and the fragility of public participation procedures) and such physical factors as energy, waste disposal, urban transport and use of green materials.

Reducing greenhouse gas emissions has become increasingly important along with finding ways to enhance regional economies while reducing their impact on the planet.

- Green Urban Strategies
- Innovative Energy Solutions
- Urban Agriculture
- Waste Management in the Built Environment
- Transformation of Cities supporting circularity of resources
- Urban Metabolism

Building Information Modeling

Building Information Modeling has been recognized as the future platform for collaboration and data integration. As a contemporary mainstream practice with a cutting-edge technological perspective in the global construction industry, building information modelling and management (BIM) is transforming construction towards higher productivity, quality, and resource efficiency. Interest in BIM has increased and it is becoming more common to see BIM as an integrated practice, spanning across the project lifecycle and enabling collaboration across projects, companies and continents.

Of particular interest is the development and the adoption of BIM in material optimization, waste and resource management in the built environment.

- Best practice case studies on BIM integrated waste and resource management, including facilities management
- Design and construction management and decision making
- BIM to support greater reuse and recovery from demolition/deconstruction
- BIM framework for Buildings as Material Banks
- Gap analyses between BIM for linear and circular economy
- Reversible buildings and BIM
- BIM for existing buildings
- Environmental and economic impact of reversible buildings

Social Cohesion & Cultural Continuity

Social cohesion and cultural continuity are an important part of contemporary city planning, architecture and engineering and in a broader sense deepen the issues related to the interaction and interdependence between Green Design and people. These are important concepts necessary to integrate knowledge and promote inclusive thinking between design and society.

Contemporary cities and societies globally are going through dramatic socio-physical changes suggesting the presence of complex multiple diversities at every level. This social and cultural awareness needs to be recognized and incorporated on all levels of creativity and drive a truly multidisciplinary approach with a human; the consumer; the occupant, always being the central focus of design development . The question is how and by what means city planning and architecture that form an envelope for humans can give an answer to the challenges that contemporary multilayered, multifunctional societies meet?

- Cultural Continuity
- Cultural Heritage
- Community Involvement
- Environment-Behavior Interaction
- Quality of Life
- Inclusive Design
- Behavioral Sciences
- Community and City
- Sustainable Urban Tourism

Mobility & Infrastructure

Movement and communication in contemporary society has become increasingly complex. Demand is more diverse and the infrastructure, both hardware and software, is also in a state of hectic development. Integration, privatization, deregulation and pricing are all affecting our understanding of and our capacity to plan the cities for these dynamic transport and mobility markets.

However, transportation also comes with significant undesirable side effects, particularly in terms of air pollution in urban areas and emissions of greenhouse gases, which can impact global climate change. The health consequences of urban air pollution and noise are also significant.

The key questions are how to: Improve customer service; Improve fuel efficiency; Reduce emissions of greenhouse gases; Reduce noise pollutions; Reduce congestion; Reduce environmental impact, Improve efficiency; Enhance vehicle and infrastructure utilization; Reduce driver stress; Minimize driver distraction and Improve safety?

- Alternative Transport Modes
- Cars and Renewable Energy
- Smart Grid
- Fossil Fuel Free Transport
- Virtualized Intersection Intelligence Adaptive
- Situational Adaptive Traffic Signaling
- Cooperative Traffic Signal Control
- Traffic-adaptive Demand Management
- Demand-responsive Parking Management

Financial, policy and regulatory standards that can stimulate development and implementation of buildings as material banks concepts and techniques

The emphasis in economics, policy and regulations is on the dynamic nature of a sustainable development where both goals and means are constantly moving. This requires a dynamic, multi-player environment that can react to the latest developments in a timely manner and provide prompt

stimulating financial, policy and regulatory models for the implementation of green solutions technologies.

- Politics and Sustainability
- Real Estate Management and Sustainability
- Planning, Development and Management
- Green Growth
- Case Studies of Green Business Models
- Impact Assessment of Green Benchmarking

Organization

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Important dates:

- Deadline for submission of abstracts: 17th August 2017
- Acceptance of abstracts: 29th August 2017
- Deadline for submission of papers: 15th September 2017
- Notification of paper reviews/acceptance: 20th September 2017

Instruction to authors

Abstract should not exceed 300 words. Abstract should clearly address: the problem statement, objectives and expected results of the presented project. Please notify one conference theme that the abstract is closest to and 5 key words. Title (11–point Arial Bold, Upper Case letters) text (10–point Arial)

Notify under the title: author(s) name, name of the institution, country and e-mail address.

Abstracts can be submitted to the following e-mail address: info@sarajevogreendesign.com

For all enquiries regarding the abstract submission, review procedure and pre-registration, please contact: info@sarajevogreendesign.com

Conference fee:
Conference fee for full participant and partners includes proceedings of the conference on the CD ROM, welcome reception, conference dinner, conference lunch, field trip

Conference fee until 15th of September

Full participants	200 euro
Partners	100 euro
Full participants West Balkan region	100 euro

Master and Bachelor students Free (registration and copy of student card required)
Conference fee after15th of September

Full participants	300 euro
Partners	150 euro
Full participants West Balkan region	70 euro

Master and Bachelor students Free (registration and copy of student card required)

Venue:

Cultural Hall Herceg Stjepan Kosaca

University of Mostar

University of Dzemal Bjedic Mostar

Accommodation Few recommendations:

http://www.hotelmostar.ba/

http://www.mepas-hotel.ba/

http://www.bristol.ba/

http://www.muslibegovichouse.com/

http://hotel-mostar.ba/ba/home

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Payment instructions:

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Address: Zmaja od Bosne BB
Sarajevo, BiH

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