

Green Architectural Design and the Enabling Technologies – January 27, Bucharest

Workshop Agenda

[9:00 – 9:30] Registration and Welcoming Coffee

[9:30 – 9:40] Opening words by the RoGBC

[9:40 – 11:40] Part 1 – Bioclimatic Building Design and Software

This section is an introduction on the design of green buildings, including some technical discussions and the introduction of software that can support green building design.

1.1. Why bioclimatic design?

- Interactive discussion – *"Which of these buildings is the greenest?"*
- Introduction to bioclimatic design

1.2. The principles of bioclimatic design

- A definition of a bioclimatic building
- The bioclimatic design process
- The climate analysis
- Climate files

1.3. Natural ventilation (theory, project examples, simulation tools)

- The Basics
- Techniques
- Some Rules
- Examples
- Software
 - Dynamic Thermal Simulation (DTS)
 - Computational Fluid Dynamics (CFD)

[11:40 – 12:00] Coffee Break

[12:00 – 13:45] Part 1 – Bioclimatic Building Design and Software (continued)

1.4. Daylight (theory, project examples, simulation tools)

- The Basics
- Sunlight
- Daylight
- Masterplanning and layout
- Some solutions
- Software
 - Solar Irradiation, Sun Path and Shading
 - Daylight Simulation

1.5 The bioclimatic design process (interactive)

"What are the stages of the design of a bioclimatic building?" - Establish a method to design a bioclimatic building, by giving the different types of analysis that are carried out at different stages of design, and by whom.



[13:45 – 14:45] Lunch Break

[14:45 – 16:15] Part 2 – The management of green building design

2.1. The EBPD and Building Energy Use

2.2. Why green buildings?

2.3. What is a green building? (interactive)

- We will go through a project and all its 'green' features.
- Workshop - *"What are the features that define a green building? Please give a list of all the green features that you can think of for a building, putting them in different categories if you feel necessary".*

2.4. The environmental rating tools (LEED, BREEAM etc)

- What are environmental rating tools
- LEED
- BREEAM
- The differences between LEED and BREEAM
- The costs of LEED / BREEAM

[16:15 – 16:30] Coffee Break

[16:30 – 17:45] Part 2 – The management of green building design (continued)

2.5. How can we achieve a green building? (interactive)

- Workshop - *"How can we achieve a green building? - Please think about challenges that may occur if you are trying to achieve a high LEED / BREEAM or other score, and how these could be overcome".*
- Some green design challenges
- Some examples of methods that are used for the implementation of green design and to achieve green design

2.6. The green design process and Charrettes (interactive)

- A short presentation on Charrettes
- Workshop - *"What could be the agenda of a green design charrette? - Please write the agenda of a green design charrette, including attendees"*

[17:45 – 17:55] Examples of Projects and Concluding Words

[17:55 – 18:00] Closing words by the RoGBC

Handouts:

- LEED – green building certification
- BREEAM – green building certification
- Green Design Charrettes – sample agendas
- List of software
- Design Stages

Trainers

Aurore Julien Dipl.Eng./MCIBSE /LEED AP /BREEAM - Head of Sustainability, Llewelyn Davies Yeang Architects

Aurore Julien leads Eco Systems, a design unit of Llewelyn Davies Yeang focused on eco and sustainable design. Trained as an engineer, Aurore has particular expertise in environmental design, building physics, natural ventilation, daylight and renewable energy systems. She also is accredited to carry out Code for Sustainable Homes, BREEAM International and LEED assessments. Aurore has been working on a wide variety of projects, ranging from schools, hospitals, residential, and offices, both in the UK and internationally. She is a Chartered Engineer and attended the National Institute for Applied Sciences (INSA France) and University College London (UCL), earning a Masters in Environmental Design and Engineering, a Membership in the Institution of Building Services Engineers (MIBSE), and certification as a LEED Accredited Professional and BREEAM assessor.

Notable projects include an innovative design of the natural ventilation system for the Eden Institute, the first residential CHP in the UK, based in the Altrincham development, the CHP for a new campus for Columbia University, New York, and consultancy for hospital and school PFI projects and several large scale residential developments in the UK.

Current projects include Tashkent, Premier City and various competitions. Prior to joining Llewelyn Davies Yeang, Aurore worked as an environmental designer in BDSP, a sustainability driven building services consultancy. She then went on to head up sustainability of the engineering consultancy Ramboll Whitbybird (RWB) for four years. During her time with RWB, the Sustainability Designer of the Year Awards was won two years consecutively (BM, 2006, and BSJ, 2007).

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Prof. Arch. Ana-Maria Dabija Ph.D. - "Ion Mincu" University of Architecture and Urbanism - Bucharest

Ana-Maria Dabija lectures within the Technical Sciences Chair of the "Ion Mincu" University of Architecture and Urbanism of Bucharest, Romania. She teaches the courses of "Architectural Detailing", "Mistakes in Building Design - Execution - Maintenance" for undergraduates and "Performant Architectural Components of the Building Envelope" within the Master courses of Buildings Rehabilitation, Sustainable Development and Energetic Audit at the Faculty of Architecture.

Professor Dabija is a member of the specialized Technical Committees of the Ministry of Development, Public Works and Housing and in the Romanian Association of Standardisation, a member of the Romanian Order of Architects, a member of the International Solar Energy Society, and a member of CIB World (International Council for Research and Innovation in Buildings and Construction).

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