

# SUSTAINABLE BUILDING DESIGN AND ENGINEERING

Prof. Rossella Corrao

On line course "ex Art. 10" Program

Semester 1st, TEAMS platform

**Nov. 12th, 2021, 16:00-18:30, Intro, Climate Change, part 1 (2,5 hrs)**

*Climate change: an environmental, social, and political challenge*  
Rossella Corrao, MArch (Hons), PhD, Full Prof. @University of Palermo, IT

*Embodied carbon: how much it affects the construction process and management of buildings*

Daniela Azzaro, MEng CEng MICE, Project & Design Manager, Associate @Arup Italy, Milan, IT

**Nov. 15th, 2021, 15:30-18:30, Climate Change, part 2 (3,5 hrs)**

*JRL Group DfMA Strategy: Design, Manufacture and Buildability for Innovative Envelope Systems*

Emanuele Calabrò, MEng (Hons) PGDip CEng MSFE MCIBSE, Head of Engineering @Midgard Ltd, London, UK

*Energy and Climate 2030 in Italy*  
Enrico Genova, MS Bldg Eng-Arch, PhD, Researcher @ENEA, Bologna Research Centre, Bologna, IT

PBL

**Nov. 26th, 2021, 15:30-19:30, Strategies for mitigating microclimate (5 hrs)**

*Multiscale methodology for evaluating the microclimate effects of vegetation on the built environment*

Rossella Corrao, MArch (Hons), PhD, Full Prof. @University of Palermo, IT

*The challenges of sustainability in UAE. SWA group's experience: "A Park in the Tower" and EXPO 2020*

Sergio Lima, MArch, Instr. @AAU, Associate Principal @SWAgroup, San Francisco, CA, USA

*Sustainability Pavilion @EXPO 2020 and Museum of the Future in Dubai*  
Simone Miriana, MSc (Hons) Meng CEng MCIBSE, Associate @Eckersley O'Callaghan, London, UK

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**Dec. 3rd, 2021, 14:30-19:00, Sustainable buildings in Mediterranean and sub-tropical areas (4,5 hrs)**

*Water and vegetation in traditional Mediterranean architecture*  
Calogero Vinci, MEng, PhD, Associate Prof @University of Palermo, IT

*Natural Ventilation in high-rise buildings*  
Humera Mughal, MS Arch Eng, BS Bldg Arch Eng, PhD, Assistant Prof. @Prince Sultan University, Riyadh, SA

*Renovation wave: technical and economic solution for retrofitting buildings*  
Enrico Genova, MEng-Arch, PhD, Researcher @ENEA, Bologna Research Centre, Bologna, IT

*Paddington Gardens in London: A new facade solution for Energy Design and Fire Engineering Compliance*

Emanuele Calabrò, MEng (Hons) PGDip CEng MSFE MCIBSE, Head of Engineering @Midgard Ltd, London, UK

**Dec. 10th, 2021, 14:30-19:30, Energy Efficiency of the Building Envelope and Design of Innovative Components (5 hrs)**

*Climate resilient facades*  
Simone Miriana, MSc (Hons) Meng CEng MCIBSE, Associate @Eckersley O'Callaghan, London, UK

*DfMA - Design for Manufactory & Assembly e DfD - Design for Disassembly*  
Daniela Azzaro, MEng CEng MICE, Project & Design Manager, Associate @Arup Italy, MI

*BIV and BIPV innovative products*  
Rossella Corrao, MArch (Hons), PhD, Full Prof. @University of Palermo, IT

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**Dec. 17th, 2021, 14:30-19:30, Quality of Sustainable Buildings (5 hrs)**

*Circular Economy, principles and applications in building construction*  
Daniela Azzaro, MEng CEng MICE, Project & Design Manager, Associate @Arup Italy, Milan, IT

*Energy Performance Certificates worldwide*  
Enrico Genova, MEng-Arch, PhD, Researcher @ENEA, Bologna Research Centre, IT

*LEED and the outdoors. Guthrie Green in Tulsa and other case studies*  
Sergio Lima, MArch, Instr. @AAU, Associate Principal @ SWAgroup, San Francisco, CA, USA

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