Sustainable structural design using traditional unreinforced masonry principles

Alessandro Dell'Endice
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Alessandro will introduce the structural principles of unreinforced masonry (URM) and their implications in terms of sustainability on the design of new structures. In his lecture, he will present some of the Block Research Group recent projects and he will describe the application of URM principles to the design of the Striatus bridge, a 3D concrete-printed URM pedestrian bridge designed in collaboration with Zaha Hadid Architects, and built in Venice in 2021, and to the design of residential units in a project called "Affordable and sustainable housing for South Africa".

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Alessandro Dell'Endice is a Post-doctoral researcher at the ETH Zurich - Block Research Group (BRG). In his PhD at the BRG, he focused on developing computational tools for the structural assessment and design of unreinforced masonry structures using the Discrete Element Modelling method. During his PhD, he was Visiting Student Researcher in the Department of Civil and Environmental Engineering at the University of California, Berkeley, hosted by Prof. Dr Matthew J. DeJong. Alessandro has been involved in the structural design, and as BRG project leader, for Striatus, a 3D concrete printed unreinforced masonry pedestrian bridge designed in collaboration with Zaha Hadid Architects and built in the Giardini della Marinaressa in Venice, during the Venice Architecture Biennale 2021, hosted by the European Cultural Centre. Alessandro holds a Master of Science in Building Engineering and Architecture from the Politecnico di Bari (Italy) and a Master in Advanced Studies (MAS) in Architecture and Digital Fabrication from ETH Zurich (Gramazio Kohler Research).

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ROMA TRE
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Friday, 2nd December 2022, 14:00
Conference Hall
Department of Engineering - Building B
Via Vito Volterra 62, 00146 Rome
Mixed mode: in-presence and remote
Link

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