



ICE UAE Committee In-Person Learned Event

“Computational Design for Complex Geometries and
Visualization”

Rudy Riachy, MSc
Computational designer – Ramboll

Wednesday, 15 March 2023, 7:00 PM – 8:30 PM (UAE Time)

Venue: Heriot-Watt University Dubai

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Established in 1818 in London, the Institution of Civil Engineers (ICE) is the first professional engineering body in the world. Since obtaining its Royal Charter in 1828, it has expanded considerably and now has more than 95,000 members across the world.

Speaker's Biography

Rudy Riachy, MSc

Computational Designer at Ramboll

Rudy is an Architect and Computational Designer with 6 years of experience, holding a master's degree in "Parametric Design in Architecture" from UPC (Universitat Politècnica de Catalunya), with a history of working in architecture and art, using the parametric approach. Throughout his academic years, he gained an interest in applying 3D modelling and computational approach to design, which cascaded over to his studies and eventually his work. This widened toolset enabled him to extend his reach farther beyond the architecture world. At Ramboll, his day-to-day activities involve collaborating with multiple disciplines which include Acoustics, Sustainability, Façade, and Structural; to model and analyse systems using computational tools, and to create multiple options backed with data for clients and stakeholders.

Rudy believes that the future of the AEC industry has already shifted towards the use of computational design in a way that greatly increases the efficiency and quality of work. Projects are further relying on this approach which thrives on the search and use of all sorts of data as an asset. Furthermore, computational design can also act as a fast and easy tool to represent any idea or geometry while producing clear and appealing visuals.



Topic Overview

Most of the time, parametric design is associated with curved and organic geometries, however this is only a fraction of its potential. In this lecture, we will be looking inside a built public art project "The Gesture" by NKS, an act of transforming destroyed hangars from the Port of Beirut area into a creative process. The sculpture is made of damaged steel beams, stands 25 meters high, and weighs approximately 35 tons.

Also, we will be discussing and revealing the power of computational Design in producing quick appealing visuals and animations without the help of any post editing software. As an architect collaborating with engineers, Rudy noticed that most of them avoid this topic and feels that representing their work in nice diagrams and drawings requires a lot of effort and the use of multiple software.

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