

Strength through Geometry - Reimagining shell structures

Prof. Philippe Block (ETH-Zürich - Block Research Group)

Friday, March 30th 2018 10:00am

Brussels City Campus @BOZAR in the Galerie Ravenstein, Brussels

Throughout history, master builders have discovered expressive forms through the constraints of economy, efficiency and elegance. There is much to learn from the structural principles they developed. Novel structural design tools that extend traditional graphical methods to three dimensions allow designers to discover a vast range of possible shell forms. By better understanding the flow of forces in three dimensions, excess material can be eliminated, natural resources conserved, and humble materials like earth and stone reimagined.

Drawing from a revival of forgotten principles combined with the latest advances in the design, engineering, fabrication and construction of doubly-curved shell structures, this lecture reveals the foundations upon which the award-winning “Beyond Bending” exhibition at the Venice Architecture Biennale in 2016 and the thin, flexibly formed concrete shell of the NEST HiLo project were based.

This lecture is organised in the framework of the course ‘Spatial Structures: design and analysis’ by Prof. Lars De Laet and Prof. Marijke Mollaert, Department Architectural Engineering, Faculty of Engineering, Vrije Universiteit Brussel (VUB).

