

The Lightweight Structures Lab of the department of Architectural Engineering of the Vrije Universiteit Brussel cordially invites you to the lecture

## Geometry-based Form Finding

Novel funicular shells inspired by the past

Vrije Universiteit Brussel ARCHITECTURAL ENGINEERING

Prof. Dr. Philippe Block Block Research Group | ETH - Zürich



**Tuesday 13.03.2012 | 17h00 - 19h00 | Auditorium D0.02** Vrije Universiteit Brussel | Pleinlaan 2-1050 Brussel | free entrance





BARCODE provides entrance to the VUB campus by car. For more info on how to reach us: http://www.vub.ac.be/english/infoabout/campuses/

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This lecture will present new computational form-finding approaches for exploring three-dimensional equilibrium shapes, inspired by the understanding of the old master builders. Through the use of intuitive graphical methods, the designer gains control over the exploration of form, which blurs the boundaries between funicular (compression-only) and freeform design. Several projects will demonstrate the power of these innovative methods for the safety assessment of historic vaults with complex geometries in unreinforced masonry and for the design exploration of funicular shapes, which range from unique signature vaults in cut stone to sustainable construction solutions for developing countries.



Philippe Block is a structural engineer and architect and since August 2009 Assistant Professor in Structural Engineering at the ETH Zurich in Switzerland, where he directs the BLOCK Research Group, specialized in the analysis and design of vaulted masonry structures and new structural design and fabrication approaches (see http://block.arch.ethz.ch/).

