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Nápoles, Suzana Metelo de

**The geometry of architecture : the formulas, the geometry of forms and their concretization**

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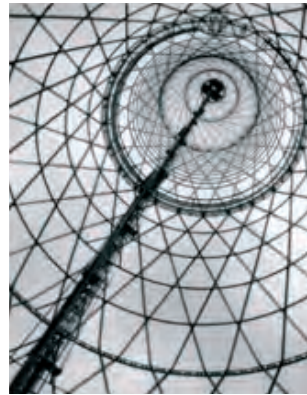


SUZANA METELLO  
DE NÁPOLES

Professor at the Department of Mathematics of the Faculty of Sciences of the University of Lisbon (DM-FCUL) and non permanent member of the Center of Mathematics, Fundamental Applications and Operations Research (CMAFcIO), Suzana Nápoles is an active promoter of mathematics and its teaching, being author and co-author of texts to teach and communicate mathematics and coordinator of the exhibitions “*Sundials and Mathematics*” (2005, FCUL) “*Calculating Yesterday and Nowadays*” (2011, FCUL with the National Museum of Natural History and Science, MUHNAC), “*Measuring Time, Measuring the World, Measuring the Sea*” (MUHNAC/Portuguese Mathematical Society collaboration, 2010) and “*Mathematic Biology Without Frontiers*” (2018 promoted by CMAFcIO, funded by the Faculty of Sciences and by the Foundation for Science and Technology). She was curator of the exhibition “*Forms and Formulas*” (MUHNAC/FCUL, 2012), author of the concept of the video “*Curved Surfaces*” and co-author of the films “*Sundials, Mathematics and Astronomy*”, a module of the MPE2013 Virtual Exhibition shown at “*Mathematics of Planet Earth Day*”, Unesco (Paris) and “*The geometry of architecture*” (2017, funded by the Calouste Gulbenkian Foundation).

## THE GEOMETRY OF ARCHITECTURE THE FORMULAS, THE GEOMETRY OF FORMS AND THEIR CONCRETIZATION

Suzana Metello de Nápoles  
Department of Mathematics  
Faculty of Sciences of the University of Lisbon



The relationships between art and architecture occur naturally and lead to an association of forms with formulas with great potential from an interactive perspective.

Through works by renowned architects such as Antoni Gaudí, Felix Candela and Oscar Niemeyer, this film intends to show the natural way in which the formulas, the geometry of forms and their concretization are intertwined.

<https://www.youtube.com/watch?v=z2Fb0R2EYo4&feature=youtu.be>

### Scientific credits

Suzana Nápoles  
Margarida Oliveira  
José Soeiro

### Video

João Filipe Silva  
Pedro Mira  
Phil Sobral [translation and voice over]