

ANNOUNCEMENT OF SEMINAR

QUALITATIVE STUDY OF NATURAL FREQUENCIES IN GUYED MASTS

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The Seminar will be held at the

Department of Civil, Chemical and Environmental Engineering (DICCA)

Polytechnic School, University of Genoa (UNIGE)

Monday 28 May 2018

Classroom A11, at 15:15

QUALITATIVE STUDY OF NATURAL FREQUENCIES IN GUYED MASTS

Natural frequencies of the structures takes a relevant role in its behavior and therefore in its design. Linearized models around the undeformed configuration are rather good approximations in several cases. This fact simplifies the mathematical procedures in order to find them. However, this type of linearization is not a good model for all types of structures. In fact, in structures like cables, membranes among others, the deformations takes a role in its behavior. Guyed masts are an example of this type of structures, in which its slenderness of the mast and the non-linear behavior of cables makes more complex the analysis of natural frequencies. The seminar is focused to make a qualitative study of natural frequencies in guyed masts as an example of this type of structures.

BIOGRAPHY:



Andrés Denis received his degree from the University of the Republic of Uruguay (UdelaR). He is currently Assistant Professor in the Department of Structures and Transport at the UdelaR. Denis has developed activities at the degree courses of Concrete structures, Masonry structures and Resistance of Materials 1, currently in the postgraduate course in Fundamentals of aerodynamics and aeroelasticity of structures. Also is working in the Municipality of Montevideo as structural engineer. Since 2008 Denis have followed an intense path from, the design of houses to determine intervention plans to guyed masts over 250 meters height. From technical defence of reinforcements of road billboard structures of 45 meters height, to the design and calculation of industrial facilities, subjected to seismic forces. The objective of his PhD, that is developing with the supervision of UNIGE-UdelaR, is to research and understand the interaction between the structures and the convective winds. In particular, the focus of the research will be to explain the main causes of poles' falls and lines of medium and low voltage caused by the Wind. Uruguay is located in the second region of the world most affected by severe convective storms, and in the area of South America that has the highest occurrence of intense extratropical cyclones.