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Subject: Πρόσκληση σε διάλεξη από τον Καθ. Gian Paolo Cimellaro (Politecnico di Torino)
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Αγαπητοί συνάδελφοι,

Παρακαλώ βρείτε συνημμένη πρόσκληση για την ομιλία του συναδέλφου Gian Paolo Cimellaro, Καθηγητή στο Πολυτεχνείο του Τορίνο. Η ομιλία θα γίνει στην Αίθουσα Τελετών της Σχολής Πολιτικών Μηχανικών την Παρασκευή 10 Φεβρουαρίου 2023 και ώρα 11.30.

Ο τίτλος της ομιλίας είναι: "A Framework for the Analytical Quantification of Disaster Resilience". Επισυνάπτεται η Περίληψη και το Σύντομο Βιογραφικό του ομιλητή.

Με εκτίμηση
Μ Φραγκιαδάκης

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A FRAMEWORK FOR THE ANALYTICAL QUANTIFICATION OF DISASTER RESILIENCE

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Abstract

Resilience is a broad and multidisciplinary subject and measuring it is one of the most challenging tasks due to the complexity involved in the process. In the seminar, the fundamental concepts of “community resilience” are analyzed and a common reference framework is established. Several applications of the framework are presented for strategic facilities (e.g. hospitals) and infrastructure networks (e.g. transportation, gas, water, power etc.) that are the basis of life and economy of every community.

Evacuation models from large-scale spaces such as malls, museums, while considering the effect of the human behavior and its emotions are developed together with the organizational models of the hospital Emergency Department. Interdependencies triggered by the debris between the built environment and the transportation network is also analyzed and applied to a virtual city to test different resilience strategies to limit losses and downtime.

Building Information Modelling (BIM) is a methodology that is radically changing the construction sector and in this seminar it has been combined with SHM for seismic vulnerability assessment of school buildings. The problem of building evacuation due to fire with the use of virtual reality is also analyzed.

Finally, the use of new information technologies to improve resilience and disaster management is also investigated showing a new sensor system to be used during emergencies to track victims indoor.

BIOGRAPHICAL SKETCH



Gian Paolo Cimellaro is currently Professor of structural engineering at the Politecnico di Torino. He has been Visiting Professor at the University of California, Berkeley (2014-2016). He obtained his M.S. (2005) and Ph.D. (2008) from the University at Buffalo (SUNY) in USA. Graduated cum laude in Civil Engineering, University of Rome La Sapienza, 2001. He is the Chair of the SHMII Committee on Resilient Structures and Infrastructure (CORSI) of the International Society for structural Health Monitoring of Intelligent Infrastructures. He is also SHMII Council member of the Governing body of the International Society for structural Health Monitoring of Intelligent Infrastructures. He has been invited to 11 Keynote lectures and 30+ seminars worldwide. He has authored 85 journal papers, 199 conference papers, 17 book chapters and 5 books. Research interests: community disaster resilience and sustainability to natural disasters. He has been awarded with a grant of 1.3 M € by the European Research Council for the project "IDEAL RESCUE - ERC-2014-StG. He is Editorial Board member of several ISI-journals. Selected awards: Fib Achievement Award for Young Engineers (2011); Seed Grant Award from the Siebel Energy Institute of UC Berkeley (2015), Best Presentation Award (2017) at SHMII8, Brisbane. www.cimellaro.org.