



EXTREME LOADING ANALYSIS OF PETROCHEMICAL PLANTS AND DESIGN OF METAMATERIAL-BASED SHIELDS FOR ENHANCED RESILIENCE <u>http://r.unitn.it/en/dicam/xp-resilience</u>





XP-Resilience Workshop

Seismic design of industrial piping systems and Soil-Structure interaction modeling

January 17 - 18, 2019

Institut National des Sciences Appliquées de Rennes (**INSA RENNES**) 20 Avenue des Buttes de Coesmes, 35708 Rennes, FRANCE

Objectives: The objectives of this worshop is to provide an overview of the current state-of-the-art on design rules for industrial piping systems and to introduce physical/numerical modeling of soil-structure interaction.

Program:

Thursday 17 th January		
8.30-12.00 AM	Experimental study of soil-structure interaction : centrifuge modelling	
	Lunch break	
1.30-5.00 PM	Simplified modeling strategies for Soil-Structure Interaction problems	
Friday 18 th January		
8.30-12.00 AM	Seismic analysis and design of industrial piping systems	
	Lunch break	
1.30-5.00 PM	Meeting between ESR's	

Workshop chairman: Pr. Mohammed HJIAJ

Workshop fees: 200 €



INSTITUT NATIONAL DES SCIENCES APPLIQUÉES RENNES

Speakers:

- Dr. Sandra ESCOFFIER, IFFSTAR / Earthquakes and vibrations group / Nantes (France)
- Pr. Spyros KARAMANOS, University of Thessaly (Greece) and University of Edinburgh (U.K.)
- Pr. Panagiotis KOTRONIS, Ecole Centrale de Nantes / GeM / Nantes (France)

Short Biography



Dr. Sandra Escoffier, Researcher, has over 15 years experience on dynamic physical modeling at the IFSTTAR center (centrifuge with earthquake simulator). She specializes in centrifuge modeling of seismic soil structure interaction and liquefaction remediation. She is/was involved in International project (LEAP) European projects (SERIES, QUAKER), French national projects (ANR ARVISE, ISOLATE), regional (Pays de La Loire) projects (CHARGEOL), bilateral collaborations (ALLIANCE) and has active collaborations with various industrial partners (SOLETANCHE BACHY, TERRASOL).



Spyros A. Karamanos, is a Professor of Computational Structural Mechanics at the University of Thessaly, Greece, at the Department of Mechanical Engineering. Since August 2016, he is the Chair of Structural Engineering, at the School of Engineering, The University of Edinburgh. He teaches courses in Structural Mechanics and Finite Element Methods. Spyros specializes in structural mechanics and integrity of energy infrastructure systems, with emphasis on steel structures. His research interests focus on buckling and fatigue of pipelines and offshore structures, mainly tubular components and systems, using computational (finite element) methods, and

experimental testing. His research has been funded primarily by European research projects, with the participation of European steel and pipeline industry. He has published more than 180 papers in refereed journals and conference proceedings. Spyros has a 5-year Diploma in Civil Engineering from the National Technical University of Athens, Greece (1989), and received his PhD in Structural Engineering from The University of Texas at Austin, USA (1993).



Panagiotis Kotronis is Full Professor, head of the Mechanics, Materials and Civil Engineering Teaching Department and responsible for the master program in Civil Engineering at Centrale Nantes. His main research interests are the modelling of reinforced concrete structures subjected to earthquakes, soil-structure interaction problems, 3D multifibre beam elements and the modelling of concrete through higher order continua. He is the author of more than 130 journal and conference papers. In 2015, he was awarded the French Association for Earthquake Engineering prize.







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Seismic design of industrial piping systems and Soil-Structure interaction

XP-RESILIENCE Workshop / Registration Form

17-18 January 2019 Department of Civil Engineering and Urban Planning / INSA de Rennes

Name :		
Organization :		
Mailing address :		
City:	Zip code:	Country:
Daytime Phone No.	Fax No:	
Email		
Registration fee 200 €		

Payment details Please make your payment to the following bank account:

Account name: *Institut National des Sciences Appliquées de Rennes* IBAN: *FR76 1007 1350 0000 0010 0483 292* BIC/SWIFT CODE: *TRPUFRP1* Bank name: *Trésor Public*

Please after the payment, e-mail a scanned copy of the bank receipt to mohammed.hjiaj@insa-rennes.fr

Registration deadline: <u>3 January 2019</u>