EXperimental & Computational Hybrid Assessment of Natural Gas Pipelines Exposed to Seismic Risk

Symposium Agenda
"Safe Energy Transmission and Storage in Earthquake Prone Areas"

18th June 2018, 18:00 – 21:30
Thessaloniki Concert Hall, M2, (Room: CR2)
Greece

17:45-18:00 Arrival to Venue (Building M2, Room CR2)

Project Update

18:00-18:10 Welcome address

George Manolis, Aristotle University of Thessaloniki, Greece (Local Organizer)

Anastasios Sextos, University of Bristol, UK (Project Coordinator)

18:10-18:30 ***Administrative and financial aspects***

Anastasios Sextos, University of Bristol, UK

18:30-18:40 ***Discussion***

WP2: Hybrid experimentation on principle failure modes of the soil-pipeline system

18:40-18:50 ***Experimental investigation of soil-pipe interaction, UniBristol***

Adam Crewe, University of Bristol, UK

18:50-19:00 ***Design of shear stack tests for soil-pipe interaction, UniBristol***

Nikos Psyrras, University of Bristol, UK

19:00-19:10 ***Experimental investigation of soil-pipe interaction, UniToronto***

Oh-Sung Kwon, University of Toronto, Canada

19:10-19:20 ***Experimental investigation of soil-pipe interaction, UniPatras***

Stathis Bousias, University of Patras, Greece

19:20-19:30 ***Mini Hybrid Setup UniToronto, UniNaples & UniBristol***

George Baltzopoulos, University of Naples, Italy

19:30-19:40 ***Coffee break***

WP3: 3D numerical simulation of soil-pipeline interaction

19:40-19:50 ***Formulation of support-pipe interaction for pipelines based on Generalized Beam Theory***

Volkmar Zabel, Bauhaus University Weimar, Germany
Carsten Koenke, Bauhaus University Weimar, Germany
Abinet Kilfe Habtemariam, Bauhaus University Weimar, Germany
Marcelo Bianco, Bauhaus University Weimar, Germany

19:50-20:00 ***Pile-soil-structure interaction in urban areas***

Robert Borsutzky, HOCHTIEF, Germany
Xenia Karatzia, HOCHTIEF, Germany
George Mylonakis, University of Bristol, UK

20:00-20:10 ***Numerical Modeling of soil-pipe interaction***

Frank Wuttke, University of Kiel, Germany

WP4: Analytical & numerical prediction of spatially variable permanent ground displacements of long NG pipelines

20:10-20:20 ***Soil-Pipe-Interaction Phenomena on Slopes Under Asynchronous Earthquake Excitation***

Thanassis Markou, Aalto University, Finland
Amir Kaynia, Norwegian Geotechnical Institute, Norway
George Manolis, Aristotle University, Greece

20:20-20:30 ***Buckling potential of buried steel pipes under spatially variable earthquake ground motions***

Nikos Psyrras, University of Bristol, UK
Oh-Sung Kwon, University of Toronto, Canada
Simos Gerasimidis, University of Massachusetts at Amherst, USA
Anastasios Sextos, University of Bristol, UK

20:30-20:40 ***Damage of natural gas pipelines under compression***

Grigoris Tsinidis, University of Sannio, Italy
Luigi Luigi Di Sarno, University of Sannio, Italy & University of Liverpool, UK

WP5: Multi-damage seismic risk assessment of soil-NG pipeline networks

20:40-20:50 ***Seismic risk assessmemt of spatially distributed systems***

Iunio Iervolino, University of Naples, Italy
George Baltzopoulos, University of Naples, Italy

20:50-21:00 ***Critical damage modes and intensity measure efficiency of NG pipelines***

Grigoris Tsinidis, University of Sannio, Italy
Peter Furtner, Vienna Consulting Engineers, Austria
Luigi Di Sarno, University of Sannio, Italy & University of Liverpool, UK

21:00-21:10 ***Post-earthquake risk assessment for buried gas pipelines at regional scale***

Raffaele De Rissi, University of Bristol, UK
Flavia De Luca, University of Bristol, UK
Anastasios Sextos, University of Bristol, UK
Oh-Sung Kwon, University of Toronto, Canada

WP6: NG Pipeline inspection and health monitoring for maintenance and rehabilitation

21:10-21:20 ***Post-hazard assessment and rating of pipelines***

Charalampos Thanopoulos, University of Patras, Greece
Peter Furtner, Vienna Consulting Engineers, Austria
Stathis Bousias, University of Patras, Greece
Helmut Wenzel, WENZEL Consulting Engineers GmbH, Austria

21:20-21:30 ***Discussion***