Analysis and Mitigation of Risks in Infrastructures INFRARISK -

4th Summer School Workshop
18th July 2018

Program

8:30 Opening Session
Prof. António Heleno Cardoso
Head of DECivil, IST
Prof. Rita Bento
Director of the Doctoral Programme INFRARISK
Dr. Desmond Hartford
Member of the Evaluation Committee
Dr. Sébastien Proust
Member of the Evaluation Committee

8:50 Inviting Lecture
Chairpersons: Prof. Rita Bento, Dr. António A. Correia
The Global RApid post-disaster Damage Estimation (GRADE) Approach: Infrastructure and Sectoral Loss Estimates in a fast-paced world
Dr. James Daniell (Invited Speaker)

9:10 Research Project Presentations – Earthquake Engineering
Chairpersons: Prof. Rita Bento, Dr. António A. Correia

Evaluation of the angle of seismic incidence effect on the collapse risk of RC buildings
Despoina Skoulidou (4th year)
Supervision: Xavier Romão (FEUP)

Experimental Tests & Numerical Modeling of Cross-Laminated Timber Diaphragms
Leonardo Rodrigues (4th year)
Supervision: Jorge Branco (U Minho), Luís Neves (U Nottingham)

Seismic risk assessment of ‘Piacca’ buildings: Cost-effectiveness analysis of techniques for risk mitigation
Vasco Bernardo (1st year)
Supervision: Paulo Candeias (LNEC), Anibal Costa (U Aveiro)

Mitigating earthquake vulnerability of mixed URM-RC buildings on the urban scale
Gonçalo Lopes (1st year)
Supervision: Romeu Vicente (U Minho), Miguel Azenga (U Minho)

Development of BRD AL Prototype: Development of an aluminium alloy hysteretic damping system for seismic retrofitting of pre-cast reinforced concrete buildings
Ricardo Ferreira (1st year)
Supervision: Jorge Preece (IST), António Gago (IST)

Seismic Loss Estimation and Strengthening of an old RC building in Lisbon
Claudia Caruso (3rd year)
Supervision: Rita Bento (IST), Miguel Castro (FEUP)

11:00 Research Project Presentations – Earthquake Engineering
Chairpersons: Prof. Romeu Vicente, Prof. Xavier Romão

Optimization methodology for the design of reinforced concrete bridge infrastructures based on evolutionary algorithms
Vítor Camacho (3rd year)
Supervision: Mário Lopes (IST), Carlos Sousa Oliveira (IST)

Seismic risk of PreCode RC buildings retrofitted with Jacketing
Sanam Moghimi (3rd year)
Supervision: Alexandra Carvalho (LNEC), Paulo B. Lourenço (U Minho)

Development and validation of an experimental platform for hybrid simulation and uncertainty quantification
Gideyom Tekeste (3rd year)
Supervision: António A. Correia (LNEC), Anibal G. Costa (U Aveiro)

Economic prospects of rehabilitation of UCH assets in Portugal: repair cost functions and cost-benefit analysis
Rui Maia (3rd year)
Supervision: Romeu Vicente (U Aveiro), Sergio Lagomarino (U Genova)

Investigations on the seismic behaviour of URM buildings with timber floors: research methodology and introductory results
María Pía Ciocci (2nd year)
Supervision: Paulo B. Lourenço (U Minho), Rui Marques (U Minho)

Lunch break

14:00 Keynote Lecture
Chairpersons: Prof. Carlos Sousa Oliveira, Prof. Laura Caldeira
The hydraulic modeling of extreme flood events
Dr. Sébastien Proust (Invited Speaker)

14:45 Research Project Presentations – Hydrological Engineering
Chairpersons: Prof. Carlos Sousa Oliveira, Prof. Laura Caldeira
CEBA: GIS based assessment on coastal erosion risk
Pedro Marro (4th year)
Supervision: Carlos Coelho (U Aveiro), Francisco da Ponte Sancho (LNEC)

The Joy of Reliable Scour Protections – a PhD survival guide
Tiago Ferradasa (4th year)
Supervision: Francisco Taveira Pinto (FEUP), Luciana Neves (FEUP), Teresa Vieu (LNEC)

Sensitivity Analysis and Probability Density of Bed Morphodynamics
Bruno Oliveira (3rd year)
Supervision: Rodrigo Maia (FEUP), Francesco Balle (Politecnica di Milano)

Risk-Based Analysis of Bridge Scour Prediction with Live Bed Conditions – 2nd year
Ana Margarida Bento (2nd year)
Supervision: Teresa Vieu (LNEC), João Pêgo (FEUP)

15:45 Coffee break

16:00 Research Project Presentations – Infrastructures & Geotechnics
Chairpersons: Prof. Paulo Lourenço, Prof. Humberto Varum

Experimental investigation and numerical modelling of embankment failure by overtopping
Teresa Alvarez (2nd year)
Supervision: Rui Ferreira (IST), Teresa Vieu (LNEC)

Multi-hazard assessment for the safety management of embankment dams
Gonçalo Faustino (1st year)
Supervision: Laura Caldeira (LNEC), João Bé Serra (LNEC), Teresa Boddrell (IST)

Risk analysis of bridges using a new reliability-based robustness assessment methodology
Hugo Guimarães (4th year)
Supervision: José Campos e Matos (U Minho), Dan Frangopol (U Lehigh), António Abel Henriques (FEUP)

Fatigue loading in historic brick masonry under moderate stress levels: Experimentally based investigations and monitoring strategies
Georgios Karanikoloudis (3rd year)
Supervision: Paula B. Lourenço (U Minho), João Bé Serra (LNEC)

Dynamic Structural Health Monitoring of an Overhead Power Line using interferometric Radar
Fábio Paiva (2nd year)
Supervision: Luís Guerreira (IST), Rui Camereiro de Barros (FEUP)

Discussion: Board of Studies and Researchers/Scholars

Closing Session
Prof. Carlos Sousa Oliveira
Members of the INFRARISK, Board of Studies
Dr. Desmond Hartford
Principal Engineering Scientist, BC Hydro, Vancouver, Canada
Dr. Sébastien Proust
Member of the Evaluation Committee