Analysis and Mitigation of Risks in Infrastructures
INFRARISK-
4th Summer School Workshop
18th July 2018

Program

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

9.20 Inviting Lecture
Chairpersons: Prof. Rita Benito, 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)

9.40 Research Project Presentations – Earthquake Engineering
Chairpersons: Prof. Rui Benito, 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: Jorgo Branco (U Minho), Luís Neves (U Nottingham)
Seismic risk assessment of “Placa” buildings. Cost-effectiveness analysis of techniques for risk mitigation
Vasco Bernardo (1st year)
Supervision: Paulo Candeias (LNEC), Aníbal Costa (U Aveiro)
Mitigating earthquake vulnerability of mixed URM-RC buildings at the urban scale
Gonçalo Lopes (1st year)
Supervision: Romeu Vicente (U Minho), Miguel Azenha (U Minho), Tiago Ferreira (U Minho)
Development of BRD_AL Prototype: Development of an aluminium alloy hysteresic damping system for seismic retrofitting of pre-casted reinforced concrete buildings
Ricardo Ferreira (1st year)
Supervision: Jorge Proença (IST), António Gago (IST)
Seismic Loss Estimation and Strengthening of an old RC building in Lisbon
Claudia Caruso (3rd year)
Supervision: Rui Benito (IST), Miguel Castro (FEUP)

11:10 Coffee break

11:30 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: Márcio Lopes (IST), Carlos Sousa Oliveira (IST)
Seismic risk of PreCode RC buildings retrofitted with Jacketing
Sanam Moghimi (3rd year)
Supervision: Alexandra Canhoto (LNEC), Paula B. Lourenço (U Minho)
Development and validation of an experimental platform for hybrid simulation and uncertainty quantification
Gladiweon Tekeste (3rd year)
Supervision: António A. Correia (LNEC), Aníbal G. Costa (U Aveiro)
Economic prospects of rehabilitation of UCH assets in Portugal: repair cost functions and cost-benefit analysis
Rui Maio (3rd year)

12:30 Lunch break

13:00 Keynote Lecture
Chairpersons: Prof. Carlos Sousa Oliveira, Prof. Paulo Lourenço
The hydraulic modelling of extreme flood events
Dr. Sébastien Proust (Invited Speaker)

13:15 Research Project Presentations – Hydrological Engineering
Chairpersons: Prof. Carlos Sousa Oliveira, Prof. Humberto Varum
CERA: GIS-based assessment on coastal erosion risk
Pedro Naranjo (4th year)
Supervision: Carlos Coelho (U Aveiro), Francisco Eduardo da Ponte Sancho (LNEC)
The Joy of Reliable Scour Protections - a PhD survival guide
Tiago Ferradás (4th year)
Supervision: Francisco Taveira Pinto (FEUP), Luciana Neves (FEUP), Teresa Reis (LNEC)
Sensitivity Analysis and Probability Density of Bed Morphodynamics
Bruno Oliveira (3rd year)
Supervision: Rodrigo Maia (FEUP), Francesco Basso (Politecnico di Milano)
Risk-Based Analysis of Bridge Scour Prediction with Live Bed Conditions - 2nd year
Ana Margarida Benito (2th year)
Supervision: Teresa Vieira (LNEC), João Pêgo (FEUP), Lúcia Couto (LNEC)

16:15 Coffee break

16:30 Research Project Presentations – Infrastructures & Geotechnics
Chairpersons: Prof. Paulo Lourenço, Prof. Humberto Varum
Experimental investigation and numerical modelling of embankment failure by overtopping
Teresa Álvarez (2nd year)
Supervision: Rui Ferreira (IST), Teresa Vieira (LNEC)
Multi-hazard assessment for the safety management of embankment dams
Gonçalo Faustino (1st year)
Supervision: Laura Caldeira (LNEC), João Bilé Serra (LNEC), Teresa Bodas Freitas (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)
Risk management applied to cultural heritage buildings.
Georgios Karakouloudis (3rd year)
Supervision: Paulo B. Lourenço (U Minho), João Bilé Serra (LNEC)
Dynamic Structural Health Monitoring of an Overhead Power Line using Interferometric Radar
Fábio Palva (2nd year)
Supervision: Luís Guerreiro (IST), Rui Caimelo de Barros (FEUP)
Discussion: Board of Studies and Researchers/Scholars

17:45 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