Analysis and Mitigation of Risks in Infrastructures INFRARISK-

6th Summer School Workshop
University of Aveiro, 11th September 2020

Location: Auditorium of the Mechanical Engineering Department

Programme

9.00 **Opening Session**

António Teixeira
Head of Doctoral School, UA

Victor Ferreira
Head of the Doctoral Programme in Civil Engineering, UA

Rita Bento
Director of the Doctoral Programme INFRARISK-

9:20 **Research Project Presentations – Earthquake Engineering**
Chairpersons: Rita Bento, Romeu Vicente

Effect of Earthquake risk on the real estate market - An Application to Lisbon
João Fragoso Januário (2nd year)
Supervision: Carlos Oliveira Cruz (IST), Humberto Varum (FEUP), Vítor Faria e Sousa (IST)

Exploring Benefit-Cost Analysis for Earthquake Risk Reduction
Holger Lovon Quispe (2nd year)
Supervision: Vítor Silva (U Aveiro), Tiago Ferreira (U Minho) Romeu Vicente (U Aveiro)

Towards an integrated vulnerability-based approach for evaluating, managing and mitigating earthquake risk in urban areas
Rafael Ramirez Eudave (2nd year)
Supervision: Tiago Ferreira (U Minho), António Formisano (U Naples)

A BIM-Based Methodology for the Seismic Performance Assessment of Existing URM-RC Buildings
Gonçalo Lopes (3rd year)
Supervision: Romeu Vicente (U Aveiro), Miguel Azenha (U Minho), Tiago Ferreira (U Minho)

Simplified methods for seismic assessment of existing masonry buildings
Vasco Bernardo (3rd year)
Supervision: Paulo Candeias (LNEC), Aníbal Costa (U Aveiro)

11:00 **Coffee break**

11:20 **Research Project Presentations – Earthquake Engineering**
Chairpersons: Xavier Romão, Tiago Ferreira

Development of aluminium alloy BRD_AL hysteretic damping system: Material characterization and cross-section configuration analysis
Ricardo Ferreira (3rd year)
Supervision: Jorge Proença (IST), António Gago (IST)

Experimental investigations on wall-to-diaphragm connections
Maria Pia Ciocci (4th year)
Supervision: Paulo B. Lourenço (U Minho), Rui Marques (U Minho)

Experimental testing in support of a seismic risk assessment
Gidewon Tekeste (5th year)
Supervision: António A. Correia (LNEC), Aníbal G. Costa (U Aveiro)

Cost function review in seismic risk mitigation
Sanam Moghimi (5th year)
Supervision: Alexandra Carvalho (LNEC), Paulo B. Lourenço (U Minho)

13.00 **Lunch break**

14:45 **Keynote Lecture**
Chairpersons: Carlos Sousa Oliveira, Daniel Oliveira

Current research activities on disaster resilience and emergency response after disasters in Italy
Gian Paolo Cimellaro (U. Torino, Italy)

15:45 **Research Project Presentations – Hydrological Engineering**
Chairpersons: Carlos Sousa Oliveira, Daniel Oliveira

Development of multi-hazard risk indicators for immovable cultural heritage
Luis Gerardo Flores Salazar (2nd year)
Supervision: Xavier Romão (FEUP), Rui Figueiredo (IUSS Pavia)

Risk-based analysis of bridge scour prediction
Ana Margarida Bento (4th year)
Supervision: Teresa Viseu (LNEC), João Pêgo (FEUP), Lúcia Couto (LNEC)

16:25 **Coffee break**

16:45 **Research Project Presentations – Infrastructures & Geotechnics**
Chairpersons: António Correia, Humberto Varum

Increasing resilience and robustness of critical infrastructures to hazards using artificial intelligence and structural monitoring
Fabiana Navia (2nd year)
Supervision: João Prudente Santos (LNEC), Xavier Romão (FEUP)

Risk analysis of transmission lines systems to natural hazards with emphasis on earthquakes and extreme winds
Fábio Paiva (4th year)
Supervision: Luís Guerreiro (IST), Rui Carneiro de Barros (FEUP)

Risk management applied to cultural heritage buildings: The effect of soil settlements and vibrations induced by underground structures
Georgios Karanikoloudis (5th year)
Supervision: Paulo B. Lourenço (U Minho), João Bilé Serra (LNEC)

17:30 **Discussion: Board of Studies and Researchers/Scholars**

18:15 **Closing Session**

Carlos Sousa Oliveira
Romeu Vicente
Members of the INFRARISK-, Board of Studies

Rita Bento
Director of the Doctoral Programme INFRARISK