



CAR - Collegio  
Cardinale Agostino Riboldi



IUSS

Scuola Universitaria Superiore Pavia



UNIVERSITÀ  
DI PAVIA

# THE EIGHTH INTERNATIONAL NIGEL PRIESTLEY SEMINAR

COLLEGIO CARDINALE AGOSTINO RIBOLDI  
PAVIA, ITALY  
23-24 MAY 2024

# ROSE

CENTRE FOR TRAINING AND  
RESEARCH ON REDUCTION  
OF SEISMIC RISK



**EUCENTRE**

FOR YOUR SAFETY.

## THE ROSE PROGRAMMES

The Centre for Training and Research on Reduction of Seismic Risk (ROSE) is an established development of the University School of Advanced Studies IUSS Pavia ([www.iusspavia.it](http://www.iusspavia.it)), a higher education institution in Italy that offers international advanced postgraduate programmes. Innovative, internationally planned, open minded, grown on the traditionally fertile soil of the University of Pavia, and based on a system of university halls of residence (Collegi) unique in Italy, IUSS prepares brilliant individuals to take on the most challenging and demanding public and private positions in contemporary Italy, Europe and the rest of the world. In this framework, ROSE offers both MSc and PhD programmes geared towards seismic risk mitigation.

The activities of the ROSE Centre are focused on research and advanced training in the field of seismic risk reduction. They encompass the fields of structural and geotechnical engineering, applied mathematics, structural dynamics, engineering seismology, probability and statistics, advanced numerical analysis and state-of-the-art experimental testing techniques. In particular, the research activities are focused on several specific topics pertinent to the effective quantification and reduction of seismic risk. These include the study of non-structural elements and their role in incurring economic losses in buildings, in addition to retrofit decision-making tools considering both seismic upgrade benefits and potential environmental impacts. The development of seismic design, assessment and risk classification methodologies via advanced probabilistic and statistical approaches for various structures and infrastructures, such as buildings and bridges, also form a core part of the ROSE Centre's research activities. Many of these are carried out in close collaboration between IUSS Pavia and the University of Pavia in addition to the Eucentre Foundation ([www.eucentre.it](http://www.eucentre.it)) through their extensive experimental testing facilities.

Training wise, each ROSE course is intensively taught in a period of one to four weeks, during which the respective lecturer is able to fully dedicate their time exclusively to the scholastic activities of the programme, thus ensuring teaching and research training at the highest possible level of quality. All of the above endows a truly unique character, be it for its fully international nature or for its innovative organisation in education and research training. Currently, jointly with the University of Pavia, IUSS runs the MSc in Civil Engineering for Mitigation of Risk from Natural Hazards, ([civrisk.unipv.it](http://civrisk.unipv.it)) featuring two paths: Reduction of Seismic Risk (ROSE) and Hydrogeological Risk Mitigation (HYRIS).

At the PhD level, both the institutions, together with the Eucentre Foundation, run the PhD in Earthquake Engineering (ROSE).

## **ATTENDING THE EVENT**

In addition to ROSE faculty and students, a maximum of 50 external participants may also be accepted, for which professionals and researchers worldwide are encouraged to take part in the event. A 160€ fee is required from external attendees, to cover for the cost of coffee/lunch breaks and seminar dinner. Special financial conditions are in place for external university researchers or students, to whom a fee of 120€ is usually requested. Those who wish to attend the Seminar are kindly invited to contact the Eucentre Foundation Secretariat at [info@eucentre.it](mailto:info@eucentre.it). You may also refer to the IUSS website (<http://www.iusspavia.it/rose>) for further information on the ROSE activities.

## **VENUE**

The ROSE activities are carried out in Pavia, a historical town in the North of Italy (35km from Milan), full of university tradition. The Seminar itself will take place at the Collegio Riboldi, a landmark structure dating back to the second half of the seventeenth century, purposely refurbished to serve as an international hosting facility for postgraduate students and visiting scholars working in the field of natural risk mitigation. It is located in the centre of Pavia, in Via Luigi Porta,10.

## **REGISTRATION - CONTACT INFORMATION** **EUCENTRE Secretariat**

Phone: +39 0382 5169811 - E-mail: [info@eucentre.it](mailto:info@eucentre.it)



# SEMINAR PROGRAMME

---

## ▼ Thursday, 23 May

9:30-10:00 Registration

---

10:00-12:30 **Session 1 - Doctoral Defences**

Infrastructure for flood risk reduction: parametric cost functions for mitigation measures and correlation of risk mapping with funds distribution. The Italian case

**Margherita D'Ayala**

In climate veritas: methodologies for investigating the impact of climate variability on wine grape productivity in Italy

**Laura Teresa Massano**

A holistic approach toward chemical safety assessment and sustainable depollution innovation

**Antonios Stratidakis**

---

14:00-16:15 **Session 2 - Doctoral Defences**

Holistic seismic rehabilitation: integrating sustainability, direct, and indirect losses in risk-targeted retrofit design and optimization

**Karim Aljawhari**

Simplified frameworks and tools for the preliminary assessment and prioritization of integrated structural and non-structural element seismic upgrades

**Alessandra Miliziano**

Advancements in risk- and loss-based methodologies for large-scale assessment of non-ductile infilled reinforced concrete buildings

**Al Mouayed Bellah Nafeh**

16:15-16:45 *Coffee break*

---

16:45-18:15 **Session 3 - Doctoral Defences**

Insights into the seismic response of pile supported wharves subjected to liquefaction-induced ground deformations: implications for design

**Ricardo Rodríguez Plata**

Seismic risk assessment for RC buildings including earthquake sequences

**Nevena Šipčić**

19:30 *Seminar Dinner*

---

## ▼ Friday, 24 May

9:30-11:00 **Session 4 - ROSE Alumni**

Digital innovation in emergency management

**Ilaria Senaldi** - Eucentre Foundation, Pavia, Italy

Damage-informed ground motion and observational fragility assessment

**Annalisa Rosti** - University of Pavia, Italy

Revisiting some numerical modelling concepts for the assessment of precast pre-stressed hollow-core slabs

**Emanuele Brunesi** - Eucentre Foundation, Pavia, Italy

11:00-11:30 *Coffee break*

---

11:30-12:30 **Session 5 - ROSE Alumni**

Masonry, shaken not stirred

**Francesco Graziotti** - University of Pavia, Italy

Numerical modelling of an earth dam: a benchmarking study

**Ali Guney Ozcebe** - Eucentre Foundation, Italy

14:30 **Session 6**

**Keynote Lecture** Emerging issues in the February 6, 2023 earthquake sequence in Turkey: seismic isolation, the outstanding winner

**Haluk Sucuoglu** - Middle East Technical University

15:30 Update on WCEE2024 organisation

**Graduation Ceremony**

## **INTERNATIONAL NIGEL PRIESTLEY SEMINAR**

As a part of the School's activities, an International Seminar is organized every year, to provide Master and PhD students with an opportunity to present and discuss their research work to an audience of international experts. The Seminar is named in honour of Prof. Nigel Priestley, co-founder of the ROSE School in 2001.

In addition to standard presentations on research work carried out within the Programmes of the School, the annual Seminar features also the tradition of inviting a prominent scientist to deliver a keynote lecture on a given contemporary and highly relevant topic in the field of Earthquake Engineering and Engineering Seismology. At this year's event, the keynote address entitled "Emerging issues in the February 6, 2023 earthquake sequence in Turkey: seismic isolation, the outstanding winner" will be delivered by Professor Haluk Sucuoglu, Professor at the Middle East Technical University.

The Seminar will also include the ROSE Doctoral Defences, featuring a committee of independent international experts in charge of the examination.

## **NIGEL PRIESTLEY INTERNATIONAL PRIZE**

Since 2008, the Prize is attributed with a frequency of two years, rewarding professionals and academics at any stage of their careers who have demonstrated uncommon skills in education or exceptional creativity and innovation capacity in the fields of earthquake engineering and engineering seismology, and have achieved extraordinary research and professional achievements.

The first recipient of the Prize was Professor M.J. Nigel Priestley. The subsequent awardees were Professors V. V. Bertero (2010), L. Esteva (2012) and G.M. Calvi (2014). After the passing away of Professor M.J. Nigel Priestley, the Eucentre Foundation decided to rename the Prize into the Nigel Priestley International Prize. Since then, the awardees were Professors S.L. Kramer (2016), A.K. Chopra (2018) and G. Fenves (2022).

The Prize consists of an art piece created by a renowned sculptor who tries to translate his own feelings and interpretation of earthquakes and their impact on human beings, environment and culture.

IUSS Pavia is the last step of a long-lasting higher education process started on 825 when King Lotharius appointed Pavia, the ancient capital of the Lombard kingdom, as the site for higher education of his kingdom. This process went through the foundation in 1361 by Emperor Charles IV of the Studium Generale later on named University of Pavia. The first Colleges for university students were established

in the 15th and 16th centuries. They are now 15 offering, to the almost 2.000 students, a unique opportunity of study and cultural enrichment in a multidisciplinary and multiethnic environment. Through the centuries University of Pavia became one of the leading institutions in Europe.

IUSS fulfils, since 1997, an advanced teaching and research model successfully implemented by other prestigious institutions in Italy, like Scuola Normale Superiore and Scuola Sant'Anna in Pisa. Due to the completeness of its education and training fields, which allows a strong interdisciplinary approach, the mission of IUSS is that of contributing to the growth of a small number of selected students by offering them, at any step of their higher education, qualified programs enhancing their capabilities and knowledge. The Institute is also committed to scientific progress by preparing young researchers and developing scientific research programmes.

# ROSE

---

CENTRE FOR TRAINING AND  
RESEARCH ON REDUCTION  
OF SEISMIC RISK



Phone: (+39) 0382.375860  
[www.iusspavia.it/rose](http://www.iusspavia.it/rose)