**ROSE FACULTY**

Aiming at a unique diversity of teaching and research training in the field of Earthquake Engineering, the organisation of the ROSE School is based on a relatively short permanent of scholars with extremely high qualification. Indeed, all lecturers at the School are internationally recognised experts in the field, coming from a number of distinguished institutions, listed below:

- G. M. Cohr
  - ROSE School, Co-Director
- M. U. S. Piecha
  - ROSE School, Co-Director
- N. Abrahamson
  - Pacific Gas & Electric Co., USA
- D. F. Abrams
  - University of Illinois at Urbana-Champaign, USA
- D. J. Anderson
  - University of British Columbia, Canada
- F. Anicich
  - Università degli Studi di Padova, Italy
- J. Barel
  - University of Canterbury, Christchurch, NZ
- J. J. Bemkers
  - Imperial College London, UK
- D. M. Boone
  - U.S. Geological Survey, California, USA
- F. Bionzi
  - Università degli Studi di Padova, Italy
- A. Cay
  - University of Canterbury, Christchurch, NZ
- M. P. Collins
  - University of Toronto, Canada
- J. Conte
  - University of California at San Diego, USA
- A. Dario
  - ETH, Zurich
- D. Der Konig
  - University of California at Berkeley, USA
- R. Dehkhodas
  - Georgia Institute of Technology, Georgia, USA
- A. Elghazawi
  - Imperial College London, UK
- A. Elsharif
  - University of Illinois at Urbana-Champaign, USA
- R. E. England
  - English Companies, USA
- E. Endres
  - Bogazici University, Turkey
- E. Faccini
  - Politecnico di Milano, Italy
- M. N. Fanin
  - University of Patras, Greece
- G. I. Fenners
  - University of California at Berkeley, USA
- A. Filippadri
  - University of New York at Buffalo, USA
- L. Gambardella
  - Università degli Studi di Genova, Italy
- M. C. Griffith
  - University of Adelaide, Australia
- J. P. Hughes
  - University of Texas at Austin, USA
- E. Kasriel
  - MIT, Cambridge, USA
- K. Katashima
  - Tokyo Institute of Technology, Japan
- M. J. Kawabata
  - North Carolina State University, USA
- S. Kjarner
  - University of Washington, USA
- C. O. Lai
  - EUCENTRE, Pavia, Italy
- R. Lemo
  - Georgia Institute of Technology, Georgia, USA
- G. Magenis
  - Università degli Studi di Padova, Italy
- G. Mancini
  - Politecnico di Torino, Italy
- G. Martin
  - University of Southern California, USA
- E. Micca
  - Stanford University, USA
- G. Monti
  - Università di Roma “La Sapienza”, Italy
- M. Nakashima
  - University of Kyoto, Japan
- T. G. O’Keeffe
  - Cornell University, USA
- S. Ono
  - Chiba University, Japan
- S. Panzarini
  - Università degli Studi di Padova, Italy
- C. Papaioannou
  - University of Patras, Greece
- A. Panza
  - Università degli Studi di Padova, Italy
- A. Pecker
  - Ecole Nationale des Ponts et Chaussees, France
- M. Perdikis
  - University of Auckland, New Zealand
- R. Priti
  - University of Padova, Italy
- C. Pirat
  - University of Rome “La Sapienza”, Italy
- J. H. Plesocek
  - Princeton University, USA
- J. Restrepo
  - University of California at San Diego, USA
- G. Rio
  - Georgia Institute of Technology, Georgia, USA
- F. Saffioto
  - Servizio Sismico Nazionale, Rome, Italy
- J. Saltenon
  - Ecole Polytechnique, Paris, France
- S. Sasso
  - University of California at San Diego, USA
- D. Slejko
  - INOGS, Trieste, Italy
- G. Scolari
  - Università degli Studi di Genova, Italy
- E. Spaccio
  - Università degli Studi di Padova, Italy
- J. Sallant
  - University of Washington, USA
- J. E. Stewart
  - University of California at Los Angeles, USA
- H. Surucyu
  - Middle East Technical University, Turkey
- T. Tottoli
  - University of Padova, Italy
- D. Veneziano
  - MIT, Cambridge, USA

The 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 multilingual and multicultural environment. Through centuries the University of Pavia became one of the leading institutions in Europe.

IUSS fulfills, since 1997, an advanced teaching and research model successfully implemented by other prestigious institutions in Italy, like the Scuola Normale Superiore and the 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 programs.

The European Commission has approved and financed an Erasmus Mundus programme, which aims to enhance quality in European higher education and to promote intercultural understanding through cooperation with third countries, a relatively large number of scholarships are available for both non-European as well as European students. Interested applicants are invited to visit the WEEES website (www.weees.org) for detailed information and instructions on financial conditions and application procedures.
THE ROSE SCHOOL

The European School for Advanced Studies in Reduction of Seismic Risk (ROSE School) is part of the Institute for Advanced Study of Pavia (IUSST: Istituto Universitario di Studi Superiori), a higher education institution in Italy that offers international advanced postgraduate programs (Masters and Doctorate). Innovative, internationally planned, open minded, grown on the traditionally fertile soil of the University of Pavia, and based on a system of Collegers unique in Italy, the IUSST prepares brilliant individuals to take on the most challenging and demanding public and private posts in contemporary Italy, Europe, the Mediterranean area and the rest of the world.

The ROSE School provides therefore higher-level education in the field of earthquake engineering, offering a number of courses covering applied mechanics, structural engineering, earthquake engineering, engineering seismology and soil dynamics, with emphasis on both theoretical background and design considerations. The MSc and PhD degrees are jointly awarded by the IUSST and the University of Pavia.

Each course is intensively taught in a period of three to five weeks, during which the respective lecturer is able to fully dedicate his/her time and efforts exclusively to the scholastic activities at the school, thus ensuring teaching and research training at the highest possible levels of quality. All of the above endows a truly unique character to the ROSE School, be it for its fully international nature or for its innovative organisation in education and research training in the field of Earthquake Engineering.

INTERNATIONAL ROSE SCHOOL SEMINARS

As a part of the ROSE program, an international seminar is organised every year, to provide the School students with an opportunity to present and discuss their research work to an audience of international experts.

In addition to standard presentations on research work carried out at 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.

At this year’s event, such keynote address will be delivered by Professor Robin Spence, with the title “Saving Lives in Earthquakes: Success and Failures Since 1960.”

ATTENDING THE EVENT

As in its previous editions, a large number of the ROSE Faculty members, listed overleaf, will be attending the Seminar, ensuring a lively and entertaining workshop. Further, it is noted that relatively extended times are allocated for the presentation of each paper, so that in-depth and highly technical discussions can take place.

In addition to ROSE faculty and students, a maximum of 50 external participants may also be accepted, for which reason professionals and researchers worldwide are encouraged to take part in the event. A fee is required from external attendees, to cover the cost of coffee/lunch breaks, seminar dinner and proceedings. Special financial conditions are, however, in place for University researchers or students, to whom a fee of not more than 120 Euros is usually requested.

Those who wish to attend the Seminar are kindly invited to compile and submit the registration form to the ROSE School Secretariat, at the address given overleaf. If you need assistance of any kind (registration form, accommodation, travelling directions, etc.), please do not hesitate in contacting our Administrative Officer, Mr. Saverio Bisoni (secretariat@roseschool.it). You may also refer to the ROSE school website for further information on all ROSE School activities.

VENUE

The ROSE School is located at the European Centre for Training and Research in Earthquake Engineering (EUCENTRE, www.eucentre.it) in Pavia, a historical town in the North of Italy (35 km from Milan), full of University tradition and fame. The ROSE School Board Meeting on Thursday 24th May will take place at the EUCENTRE.

The Seminar itself will take place at the Aula Foscolo of the Università degli Studi di Pavia (www.unipv.it). It is located in Corso Strada Nuova 65.

PRE-SEMINAR ACTIVITIES

LESSLOSS is a European Integrated Project focusing on Risk Mitigation for Earthquakes and landslides that relies on the active participation of 4th European partners from both academia and industry (www.lesloss.org). The research/innovation effort within the LESSLOSS project is comprised of a number of different research components, or SubProjects. On Wednesday 23rd May the LESSLOSS workshop for SubProject 9 “Probabilistic risk assessment: methods and applications” will take place at the EUCENTRE. The programme of this workshop is reported in the enclosed leaflet.

PROGRAMME OF THE SEMINAR

Thursday, 24th May

10.00 – 13.00 ROSE School Board Meeting (at EUCENTRE)
13.00 – 14.30 Welcome lunch and registration
14.30 – 16.00 Session 1 - Chairman: J.J. Bommer
Mapping seismic landslide hazard in low seismicity regions
V. Kumar Dhaka, C. Strobbia, A. Dall'Ara, C.G. Iai
Effects of seismic intensity soil dynamics amplification evaluated through numerical models
M. Asinari1, M.E. Ruiz, C.A. Prato
Numerical simulation of tsunamis in the Indian Ocean
R. Appayyam1, S. Tinti, C.G. Iai
Increased accuracy of vector-based seismic risk assessment
R. Pianarossa2, P. Franchin, P.E. Pinto
16.00 – 16.30 Coffee break
16.30 – 17.30 Session 2 - Chairman: G.M. Calvi
Design procedures and numerical analysis of laminated veneer lumber lateral resisting systems
M.P. Newcomb1, S. Pamparin, A. Buchanan, A. Palermo
Seismic performance of AAC masonry buildings: From experimental testing of the lateral capacity of piers to building response simulation
A.A. Costa1, A. Penna, G. Magenes
Definition of seismic input for acceleration-sensitive and displacement-sensitive structural and non-structural components of a building
A. Meroni2, G. Magenes
20.30 – 23.30 ROSE Seminar Dinner

Friday, 25th May

9.30 – 10.30 Session 3 - Chairman: G. Magenes
Assessment of the impact of seismic retrofit on 1920-1940 blocks of flats with reinforced concrete structure
M. Boatoani1, R. Pinho
Determination of appropriate SDOF characteristics of 3D dual-systems for displacement-based loss assessment studies
E. Yuan1, I.E. Baj, H. Crowley, R. Pinho
Seismic rocking isolation effect on superficial foundations of bridges
D. Baffo1, K. Kawasaki
10.30 – 11.00 Coffee break
11.00 – 12.30 Session 4 - Chairman: A. Pasqua
Italian codes and Eurocode 8: A critical review of existing building assessment methodologies
V. Mampatsikas1, L. Petruini, R. Nasiocimbere
Real vs. artificial accelerograms for time-history analysis: Comparison based on the seismic response of EC8-designed RC frame buildings
J. Rivera1, C.G. Iai, L. Petruini
Cyclic behaviour of RC Unshaped walls: An analytical and experimental investigation
K. Bayern2, A. Dazio, M.J.N. Priestley
Effects of damping modelling on the non-linear time-history results of RC structures
G.M. Calvi2, C. Maggi, L. Petruini, M.J.N. Priestley
12.30 – 14.00 Lunch break
14.00 – 15.30 Keynote lecture – R. Spence
Saving lives in Earthquakes: Success and Failures Since 1960
Displacement-Based Seismic Design of Structures
15.45 – 17.00 Graduation ceremony
Programme of future activities
Closing speeches

1MSc Student, 2PhD Student, 3Marie Curie Fellow