UME FACULTY

Aiming at a unique diversity of teaching and research training, the organisation of the ROSE, REM, WRR, ECR, WGCER Programmes is based on a relatively short permanence of scholars with extremely high qualification. Indeed, all lecturers are internationally recognised experts in their field, coming from a number of distinguished institutions.

Director
G.M. Calvi

UME Faculty

N. Abrahamson
S. Akkar
R.J. Archuleta
A. Aref
F. Auricchio
B.B. Basbug-Erkan
P. Bazzurro
J. Berrill
K. Beyer
J.J. Bommer
G. Boni
F. Bonilla
D.M. Boore
A. Borio di Tigliole
R. Boroschek
F. Brezzi
C. Burton
M. Cagnazzo
P. Calvi-Parisetti
A. Carr
G. Castellano
C. Christopoulos
M. Cocco
M.P. Collins
J. Conte
F. Crisafulli
H. Crowley
M Cubrinovski
V, Curie
L. Danciu
A. Dazio
M. De Clerck
F. Dell'Acqua
K. Demeter
A. Der Kiureghian
R. DesRoches
R. Eguchi
A. Elgamal
A.Y. Elghazouli
A. Elnashai
M. Erdik
E. Faccioli
M.N. Fardis
E. Ferrero
G.L. Fenves
S. Figini
A. Filiatrault
B. Folz
P. Franchin
P. Gamba
L. Garrido
M.C. Griffith
P. Gülkan
R. Hermann
S. Hochrainer-Stigler
G. Holland
T.J.R. Hughes
H. Igel
E. Kausel
E. Kavazanjian
K. Kawashima
T. Kokusho
M.J. Kowalsky
S.L. Kramer
C.G. Lai
D. Lallemant
F. Laurini
D. LeBoeuf
R. Leon
C. Lovadina
A. Loretti
R. Madariaga
G. Magenes
R. Mechler
A. Mira
E. Miranda
A. Monti
G. Monti
F. Naeim
M. Nakashima
S. Nielsen
M. Oborne
Y. Okuyama
S. Otani
M. Pagani
S. Pampanin
R. Paolucci
A.S. Papageorgiou
A. Parodi
P. Paultre
A. Pavese
A. Pecker
M. Pender
F. Perugia
J. Pettinga
R. Pinho
P.E. Pinto
C. Prato
J.H. Prevost
G.A. Rassati
E.M. Rathje
A. Reali
M. Regester
J. Restrepo
B. Reynolds
G. Rix
R. Rudari
D. Sarigiannis
J. Schneider
C. Scholz
J.F. Semblat
D. Slejko
M. Sozen
E. Spacone
J.F. Stanton
D. Stephenson
J.P. Stewart
H. Sucuoglu
T. Sullivan
J. Swanson
A. Taramelli
E. Todini
T. Triantafillou
C.M. Uang
G. Valensise
K. Verosub
P.L. Vidale
R. Vitolo
S. Winterstein
B. Yekeler
B. Youngman
S. Zatti

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.

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Erasmus+

The European Commission has approved and financed within the Erasmus Plus the Masters on Earthquake Engineering and Engineering Seismology (MEEES), coordinated by UME School and featuring also the participation of University of Grenoble Joseph Fourier (France), University of Patras (Greece) and Middle East Technical University (Turkey), which aims to enhance quality in European higher education and to promote intercultural understanding through co-operation with Partner Countries. A number of scholarships are available for both non-European and European students. Interested applicants are invited to visit the MEEES website (**www.meees.org**) for detailed information and instructions on financial conditions and application procedure.

Design Eucentre 2017 - **Pavia, Italy**

IUSS Scuola Universitaria Superiore Pavia
CAR - Collegio Cardinale Agostino Riboldi
Università degli Studi di Pavia

The Third International Nigel Priestley Seminar

Collegio Cardinale Agostino Riboldi

Pavia, Italy
25-26 May 2017

UME
understanding
and managing
extremes

EUCENTRE
European Centre for Training and Research in Earthquake Engineering

THE UME CENTRE

The Centre for Post-Graduate Training and Research in Understanding and Managing Extremes - UME is a new exciting development of the School of Advanced Studies IUSS Pavia (**www.iusspavia.it**), a higher education institution in Italy that offers international advanced postgraduate programmes (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 Colleges 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, the UME Centre offers graduate programmes geared towards the evaluation of uncertainties, risk mitigation and emergency management. The key objective is to provide a system within which Masters and Doctoral candidates can study, understand and deal with extreme events. The UME programmes currently address three main areas:

- **Disaster risk assessment**, focusing mainly on natural hazards such as earthquakes, hurricanes, fires, landslides and floods (with possible extensions to the topics of climatology, desertification, human-made and technological risks, etc.)
- **Extreme situation management**, which includes topics of statistics and probability, law, economics, resource management, finance, insurance, sociology, ethics, psychology and medicine.
- **Engineering for risk mitigation**, which includes topics on engineering to increase the capacity of buildings and infrastructure to withstand the demands from extreme events.

At the UME Centre, each course is intensively taught in a period of one to four weeks, during which the respective lecturer is able to fully dedicate his/her time exclusively to the scholastic activities at the school, thus ensuring teaching and research training at the highest possible level of quality. All of the above endows a truly unique character to the UME Centre, be it for its fully international nature or for its innovative organisation in education and research training. Currently the UME Centre runs Masters and Doctoral Programmes in Earthquake Engineering and Engineering Seismology (ROSE), Risk and Emergency Management (REM), and the Doctoral Programme in Weather Related Risk (WRR) and Environmental and Chemical Risk (ECR).
The ROSE Programme provides higher-level education in the field of earthquake engineering, offering a number of courses covering applied mechanics, structural engineering, earthquake engineering, and engineering seismology. In addition to the PhD Degree, the programme offers Master Degrees in earthquake engineering and engineering seismology **with** (see the Erasmus Mundus paragraph overleaf) and **without** mobility. The REM, WRR and ECR PhD Programmes aim to train graduates and professionals in the assessment, mitigation and management of extreme events (both before and after they occur), with a primary focus on those arising from natural hazards.

INTERNATIONAL NIGEL PRIESTLEY SEMINAR

As a part of the School's activities, an International Seminar is organised 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 "Capturing Liquefaction and Ground Failure from Space" will be delivered by Professor Ellen Rathje, Professor at the University of Texas at Austin, USA.

The Seminar will start with the UME Doctoral Defence.

ATTENDING THE EVENT

In addition to UME 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 compile and submit a registration form to the UME 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 staff at **secretariat@umeschool.it**. You may also refer to the UME website (**www.umeschool.it**) for further information on all UME Centre activities.

VENUE

The UME Centre is located 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 (**www.eucentre.it/car-college/?lang=eng**), 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.

SEMINAR PROGRAMME

Thursday, 25th May

13.30-14.00	Registration
14.00-16.00	**Session 1 - UME Doctoral Defence - Chairman: G. Magenes**
	Integrated Seismic Risk Assessment of Turkey **Sevgi Özcebe**[1]
	Incorporating Near-Fault Directivity Effect in Probability Seismic Hazard Assessment **Yen-Shin Chen**[1]
	Seismic Assessment of Spatially Distributed RC Bridge Portfolios **Claudia Zelaschi**[1]
16.00-16.30	*Coffee break*
16.30-18.30	**Session 2 - Chairman: R. Monteiro**
	Exploring Earthquake Risk Reduction Strategies in Central America **M.C. Hoyos Ramirez**[2]
	Using Macroseismic Intensities as an Alternative to Compare PSHA Results in Italy **A.F. Hernandez Estrada**[2]
	Seismic Assessment of a Liquid Storage Tank as a Non-Structural Component **R.J. Merino Vela**[2]
	Collapse Capacity of Steel Buildings Retrofitted with Linear and Nonlinear Viscous Dampers **B. Chalarca Echeverri**[2]
19.30-23.30	*Seminar Dinner*

Friday, 26th May

09.30-11.00	**Session 3 - Chairman: M. Ordaz**
	Fiber Reinforced Concrete Beams under Pure Torsion: Analytical and Experimental Results **R. Jaramillo Rivera**[2]
	The Effect of Spatial Resolution in Exposure Models on Seismic Loss Estimation **J. Dabbeek**[2]
	Seismic Safety Assessment of the San Sebastian Basilica in Manila, Philippines **N. O'Hearne**[2]
	Interpretation of Direct Shear Test and Detailed Micro-Modeling of Brick Masonry: the Role of Dilatancy **G. Andreotti**[1]
11.00-11.30	*Coffee break*
11.30-13.00	**Session 4 - Chairman: M. Griffith**
	Progressive Collapse of RC Structures with and without Consideration of Infills **N. Eren**[2]
	Soft-Storey Building: From Rapid Visual Identification to Advanced Numerical Predictions **M. Miglietta**[2]
	In-Plane Seismic Performance of RC Structures with an Innovative Masonry Infill with Sliding Joints **A. Rossi**[1]
13.00-14.30	*Lunch break*
14.30-16.30	**Session 5 - Chairman: G.M. Calvi**
	Keynote lecture - Capturing Liquefaction and Ground Failure from Space **E. Rathje**
	Overview of 2016-2017 Eucentre and UME Activities
	Graduation Ceremony

[1] PhD Student, [2] Master Student