

PhD in EARTHQUAKE ENGINEERING (ROSE)

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Scientific fields	ICAR/09, ICAR/07, GEO/10
Brief description	The PhD in Earthquake Engineering (ROSE) is a three-year full-time joint programme with the University of Pavia. The ROSE PhD aims to train graduates and professionals with strong scientific and professional capabilities, aware of the cultural, technical and management contents related to earthquake engineering and seismic risk, including topics related to seismology, geophysics, geology, geotechnics, behaviour of materials and structures, structural analysis, design of new structures and assessment of existing structures, with particular attention to the study of data acquisition methods, methods of investigation of materials, technologies and structures, the development of interpretative frameworks for assessment of hazard, vulnerability, exposure and, consequently, seismic risk, and techniques for safeguarding elements and structures, i.e. essential project components for risk reduction. The programme is characterised by interdisciplinary character, international experience, constant reference to the most advanced and applied research.
Language	English
Duration	3 years
Number of positions available	7 positions, of which: <ul style="list-style-type: none"> - 1 with scholarship funded by National Recovery and Resilience Plan (PNRR) - DM 118/2023 – Research PNRR, on the following topics: Integrated seismic and energy efficiency design of buildings This scholarship addresses, for example, and not exclusively, design schemes for new buildings including risk and environmental impact metrics and new guidelines and model design codes for sustainable buildings facing, e.g., natural hazards and climate change. - 1 with scholarship funded by National Recovery and Resilience Plan (PNRR) - DM 118/2023 – Research PNRR, on the following topics: Optimal Seismic Retrofitting of Existing Structures for improved sustainability The research foreseen in this scholarship focuses, among other topics, on developments in seismic retrofit schemes and techniques, combined with other criteria, such as energy efficiency, evaluated in a comprehensive manner with a range of key sustainability-related structural, economic and social decision variables. - 1 with scholarship funded by National Recovery and Resilience Plan (PNRR) - DM 118/2023 – Investment 3.4 - Digital and Environmental Transitions, on the following topic: Multi-hazard assessment and sustainable retrofitting of ageing buildings and bridges This research will address methodologies for quantitative risk assessment of existing buildings and bridges, subjected to seismic and other hazards, considering the large-scale analysis of bridge and building portfolios under natural and anthropic hazards, and the impact of their out-of-service/collapse.

	<ul style="list-style-type: none"> - 2 with scholarships funded by the University of Pavia through the National Recovery and Resilience Plan (PNRR) - DM 118/2023 – Investment 4.1 Public Administration, on the following topic: Risk assessment and damage scenarios of existing structures for development of civil protection strategies The thesis will deal with developing tools for predicting and reducing the consequences of seismic events on infrastructures and components of strategic interest for the Province of Pavia, allowing to develop plans for reducing the interruption of essential services and/or consequences also on the environment. - 2 with scholarships funded by the Eucentre Foundation, on a topic to be agreed upon, with the Eucentre Foundation, at the beginning of the programme.
<p>Submission deadline for the online application</p>	<p>28 June 2023 at 13:00 (CEST)</p>
<p>Mandatory documentation* to be attached to the online application</p> <p><i>*failure to upload the documentation referred to in (a) and (b) will result in exclusion from the competition procedure</i></p>	<ul style="list-style-type: none"> a) A PDF copy of a valid identity document; b) Self-certification of the MSc Degree Certificate (in case of Italian or UE educational qualification) <u>OR</u> copy of the MSc Degree Certificate (NON-EU educational qualification). c) Academic and professional CV; d) <i>Diploma Supplements</i> (or similar documents) of “Diploma di Laurea Triennale”/BSc Degree and “Diploma di Laurea Magistrale”/MSc Degree; e) Scientific publications (and list of relevant publications);
<p>Qualification assessment</p>	<ul style="list-style-type: none"> a) Academic and professional CV; b) <i>Diploma Supplements</i> (or similar documents) of “Diploma di Laurea Triennale”/BSc Degree and “Diploma di Laurea Magistrale”/MSc Degree; c) Scientific publications (and list of relevant publications); d) Up to three reference letters (to be sent by the referees following the online application procedure); e) Any other academic or professional qualifications that the candidate deems relevant to the programme.
<p>Interview and evaluation</p>	<p>The selection will be performed through the assessment of the qualifications listed in the section “Qualification assessment” (maximum 50 points) and through an interview (maximum 50 points). The Selection Board will therefore award a final score from 1 to 100.</p>
	<p>The Selection Board will assess the submitted scientific qualifications awarding a score up to 50 points. The candidates obtaining a score of at least 36/50 in the assessment phase, will be accepted to the interview. Candidates are not required to be present during the assessment of qualifications.</p> <p>The interview may also be carried out online, as long as the candidate can be identified. The interview will entail a discussion about the scientific background and skills of the candidate and about the research that the candidate would like to conduct, as well as technical/scientific questions, with the aim of ascertaining the candidate’s background, vocation and aptitude for research. Candidates obtaining a score below 36/50 in the interview will not be eligible to be admitted to the programme hence not part of the ranking list.</p> <p><u>During the interview, the selection board will verify that the candidate has the necessary fundamental knowledge and skills to for attending the doctoral course and evaluate the eligibility for the research topics of the scholarships announced.</u></p>

	IUSS Pavia will notify the scholarship holders of their admission to the programme using the e-mail address provided in the application.
Test schedule	The results about the evaluation process will be published on the IUSS website http://www.iusspavia.it . The interviews will be carried out from 18/07/2023 at 09:30 CEST onwards, at the "EUCENTRE Foundation", Via Ferrata n. 1, 27100, Pavia or online, via Zoom.
Information	e-mail: postlaurea@iusspavia.it