

Opening of 4 Ph.D. positions at UniTRENTO within XP-Resilience



XP-Resilience: extreme loading analysis of petrochemical plants and design of metamaterial-based shields for enhanced resilience

XP-RESILIENCE is an inter/multi-disciplinary programme including seven academic partners, one Institute of Applied Science and seven private companies from ten different European countries. XP-RESILIENCE intends to establish a network of individual research projects working towards Advanced Modelling and Protection –via metamaterial-based isolators/layouts- of Complex Engineering Systems for Disaster Reduction and Resilient Communities.

The objective of XP-RESILIENCE is to train researchers combining a robust academic foundation in reliability/resilience with practical experiences, technological expertise with awareness of the socio-economical context and conviction to furthering research with an entrepreneurial spirit. It aims at offering innovative research training ground as well as attractive career development and knowledge exchange opportunities for a total amount of 14 Early Stage Researchers (ESRs; of which 4 at UniTRENTO), at different sites through cross-border and cross-sector mobility for future growth in Europe.

The Department of Civil, Environmental and Mechanical Engineering at the University of Trento (UNITN - Italy) (<http://www.dicam.unitn.it>), will recruit and host two ESRs:

- **ESR1:** Analysis and risk assessment of petrochemical plants endowed with innovative metamaterial-based shields under seismic/fire loadings. Applications are welcome from students with masters qualifications in the areas of civil/mechanical engineering, structural mechanics or a similar field of study, with a possibly strong background in numerical modelling, dynamics and uncertainties (contact O.S. Bursi oreste.bursi@unitn.it or N. Tondini nicola.tondini@unitn.it, for details).
- **ESR2:** Novel analysis of shallow and deep foundations and optimal layouts of subplants/plants under seismic conditions. Applications are welcome from students with masters qualifications in the areas of civil engineering, applied mechanics or a similar field of study, with a possibly strong background in constitutive and numerical modelling in Geomechanics/Geotechnics. (contact A. Gajo alessandro.gajo@unitn.it or F. Cecinato francesco.cecinato@unitn.it for details).

VCE Vienna Consulting Engineers ZT GmbH (VCE - Austria) (<http://vce.at/en/home>) will recruit and host one ESR (who will be hosted as PhD candidate also at UniTRENTO):

- **ESR4:** Development of an optimal real-time monitoring system for petrochemical plants subjected to NaTech events. Applications are welcome from students with masters qualifications in the areas of civil/mechanical engineering, structural mechanics or a similar field of study, with a possibly strong background in numerical modelling, dynamics and uncertainties (contact H. Wenzel wenzel@vce.at or P. Furtner furtner@vce.at for details)

ARCELORMITTAL Belval & Differdange SA (AM - Luxembourg) (<http://corporate.arcelormittal.com/>) will recruit and host one ESR (who will be hosted as PhD candidate also at UniTRENTO):

- **ESR13:** Risk/resilience-based design of petrochemical plants and development of recommendations for Eurocode extension.
Applications are welcome from students with masters qualifications in the areas of civil engineering, structural mechanics or a similar field of study, with a possibly strong background in numerical modelling (contact N. Popa nicoleta.popa@arcelormittal.com or O. Vassart olivier.vassart@arcelormittal.com for details)

To be eligible, candidates must comply with mobility requirements. Please see http://ec.europa.eu/research/participants/data/ref/h2020/other/guides_for_applicants/h2020-guide-appl16-msca-itn_en.pdf for details.

More information and application at:

<http://www.unitn.it/en/ateneo/1954/announcement-of-selection>

The **application deadline** is at **4 pm (Italian time, GMT +2) of 25/08/2016**.

Funding

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Call: **H2020-MSCA-ITN-2016**
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