

Special session title: Risk analysis of major hazard industrial facilities for enhanced resilience

ABSTRACT

The tremendous impact of natural hazards, such as earthquakes, tsunamis, flooding, etc, which triggered technological accidents, referred to as natural-technological (NaTech) events, was demonstrated by: i) the recent Tohoku earthquake and the following Fukushima disaster in 2011; ii) the UK's 2015 winter floods which topped £5bn, with thousands of families and businesses that faced financial problems because of inadequate or non-existent insurance. Therefore, today there is a stronger need than ever to grow researchers/practitioners that combine a robust academic foundation in reliability/vibration mitigation with practical experience, technological expertise with awareness of the socio-economical context and conviction to furthering research. Hence, the objective of this Special Session is to offer an occasion for presentations in risk-based simulation/development of major-hazard process plants subjected to earthquakes and community disaster resilience.

The following topics include are welcomed:

Risk-based frameworks for major hazard facilities.

Procedures for the definition and propagation of accidents chains in risk analysis.

Quantitative risk analysis of process facilities.

Quantifying resilience for facility/community performance during and after a seismic event

Setting concepts of recovery and functionality

F. Paolacci(*), O.S. Bursi(**)

(*) **Fabrizio Paolacci** | **Associate Professor** | PhD, M.ASME, M.ASCE

Chair of the WG13 of the European Association of Earthquake Engineering

Roma Tre University – Department of Engineering

Via Vito Volterra 62, 00146, Rome, Italy

Phone: +39 0657336418, **Mobile:** +39 3290570703

<https://www.romatrestrutture.eu/people/fabrizio-paolacci/>

(**) Oreste S. Bursi, Ph.D., P.E., MASME,

Professor of Structural Dynamics and Control

e-mail: Oreste.Bursi@unitn.it

Depart. of Civil, Env. & Mechanical Engineering

Via Mesiano 77 - 38123

University of Trento - ITALY

Fax number +39-0461-282505/282599

Phone number +39-0461-282521.

<http://r.unitn.it/en/dicam/nhmsdc>

<http://me.unitn.it/oreste-bursi/>