

# Workshop on Seismic Performance of multi-component systems in special risk Industrial Facilities (SPIF)

**Organized by the Eucentre,  
University of Aachen, University of  
Trento and Roma Tre University**

**Seminar Room of Eucentre  
Pavia, September 3<sup>rd</sup>, 2020**

## BACKGROUND AND MOTIVATION

Industrial facilities consist of the primary load-carrying structure and various process engineering components (secondary structures), which under seismic loading, may exhibit significant damage that may threaten their structural integrity with severe consequences on the population, the environment and the economy.

Structures in industrial facilities vary widely from flexible piping to rigid machining tools, and from small precision equipment to large cranes. Most machine installations have specific functions, including manufacturing precision, number of revolutions, production efficiency, and supply capacity, thus the functional failure is as important as structural failure. This is typical for highly developed information technology processes. Furthermore, piping systems can also exhibit significant damage, which occurs at specific locations, as demonstrated with experimental and numerical investigations.

The analysis of literature reveals that experimental studies have been carried mostly on individual components. Moreover, works on non-structural components are very limited and the available codes and guidelines are usually based on past experiences, engineering judgment and intuition, rather than on objective experimental and analytical results. Therefore, the project SPIF (Seismic Performance of multi-component systems in special risk Industrial Facilities) aims to provide more experimental data, which can be useful for widening the knowledge in this field and improving design guidelines and building codes.

The workshop is aimed at presenting the preliminary outcomes of the project both from the experimental dynamic tests and from the numerical investigations performed.

The workshop will follow the international meeting of WG 13, *Seismic assessment, design and resilience of industrial facilities*, established at the European Association for Earthquake Engineering.

## SCIENTIFIC COMMITTEE

**Oreste S. Bursi, Christoph Butenweg, Marko Marinković, Fabrizio Paolacci, Alberto Pavese,**

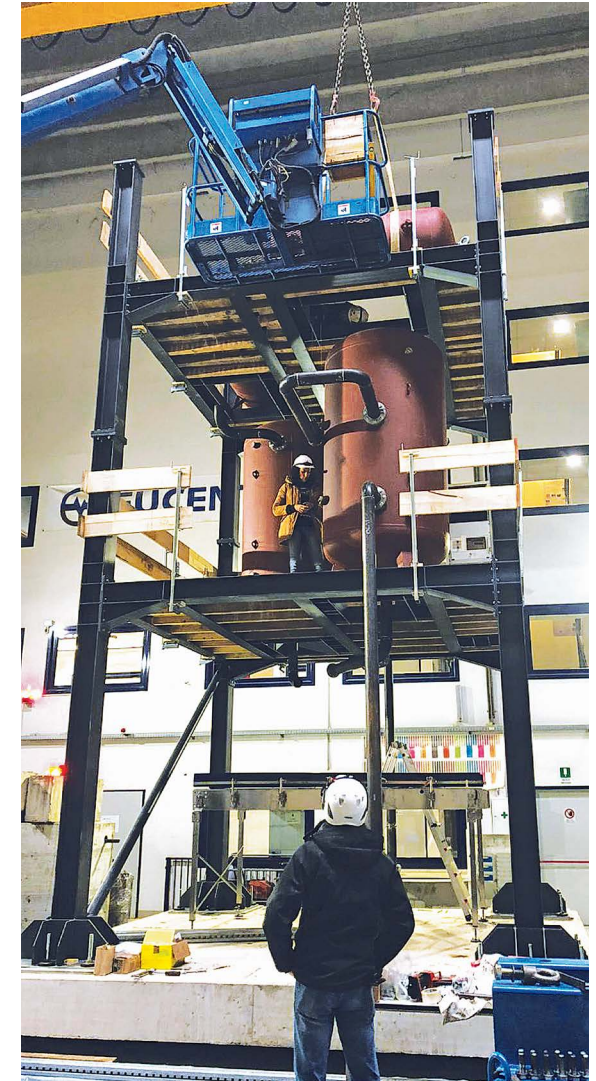
## LOCAL ORGANIZING COMMITTEE

**Alberto Pavese, Igor Lanese, Elisa Rizzo Parisi**

## WORKSHOP CHAIR

**Prof. Alberto Pavese**

Fondazione Eucentre, Via A. Ferrata, 1 - 27100 Pavia

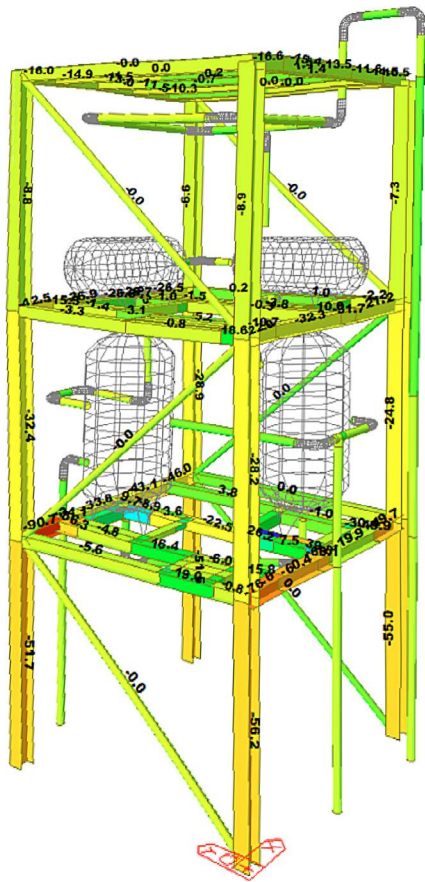


## WORKSHOP OBJECTIVE

The main objective of this workshop is the illustration of the preliminary results of the SPIF project and getting Practitioners and Experienced Researchers acquainted with the Seismic behavior of industrial installations.

## WHO SHOULD ATTEND

Graduated students, postdoctoral researchers and practitioners willing to understand the main issues in seismic design of industrial installations, and in particular primary and secondary elements.



## WORKSHOP SCHEDULE

9.45-10.00

*EAEE - WG13 delegates registration*

10.00-13.00

*EAEE - WG13 meeting*

13.00-14.00

*Lunch break*

14.00-14.10

**Workshop registration**

14.10-14.20

**Fabio Germagnoli** - Eucentre

*Presentation of EUCENTRE Foundation*

14.20-14.30

**Alberto Pavese** - Eucentre

*Presentation of the Seismology and Earthquake Engineering Research Infrastructure Alliance for Europe (SERA Project)*

14.30-14.50

**Fabrizio Paolacci** - Roma Tre University

*The new WG13 initiative in the EAEE. Main issues in seismic design of industrial pipe racks*

14.50-15.10

**Christoph Butenweg** - University of Aachen

*Presentation of the SPIF project - Seismic performance of multi-component systems in special risk Industrial facilities*

15.10-15.30

**Oreste S. Bursi** - University of Trento

*Challenges and special problems in seismic testing of multi-component systems of industrial facilities*

15.30-15.50

**Igor Lanese** - Eucentre

*Testing issues of the SPIF Project*

16.00-16.30

*Visit at the Eucentre laboratory*

16.45-17.00

**Conclusions**

WG13 and Workshop Delegates may attend events both in person or by using Zoom webinar tool

## REGISTRATION

The participation is free of charge but the registration is required. To register please fill in the **Registration form** by August 31, 2020.

For more information please contact: [saverio.bisoni@eucentre.it](mailto:saverio.bisoni@eucentre.it)

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## VENUE OF THE WORKSHOP

The Workshop will take place at Eucentre Foundation in via Adolfo Ferrata, 1 - 27100 Pavia  
For more information please visit:

<https://www.eucentre.it/where-we-are-contacts/>

