

INTEGRATED STRUCTURAL MONITORING AND NUMERICAL SIMULATIONS FOR BUILDING SAFETY AND RESILIENCE



Research Day UNICAM
Camerino 12 dicembre 2024



Authors: A. Dall'Asta, G. Leoni, A. Zona, M. Morici, F. Scozzese, L. Gioiella, F. Micozzi, V. Leggieri, A. Poeta, L. Principi, L. Barchetta, L. Minnucci, M. Malatesta

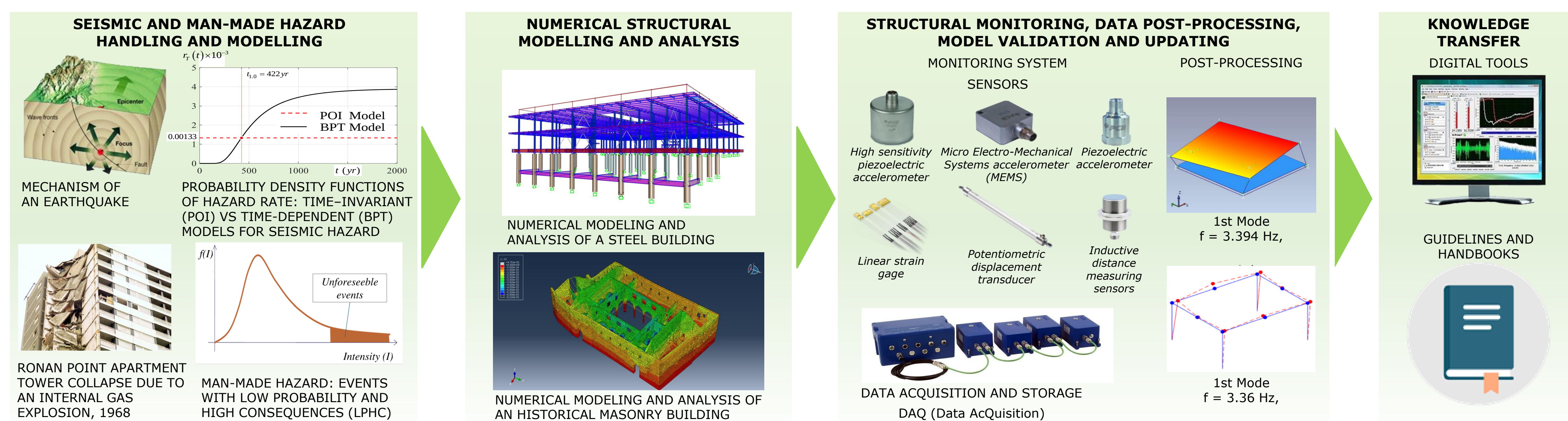
Permanent/temporary staff: 30% permanent staff / 70% temporary staff

School of Architecture and Design
School of Science and Technologies



Characterizing studies

The research activities is aimed to provide: i) rational and effective methodologies to **handle natural and man-made hazards** in the design and safety assessment of buildings; ii) **advanced** and **efficient modelling** tools to predict the **structural response** of buildings under different hazards for a wide range of structural systems, from **historic** and **monumental architectural heritage** to **modern engineered buildings**; iii) **structural monitoring** and **experimental procedures** to identify the actual behavior of structural systems for model updating and validation, condition-based assessment and maintenance, and damage detection; iv) Dissemination and **knowledge transfer** in **handbooks** for researchers, professional engineers and architects as well as non-technical stakeholders.



National and International Impact: contributions to advancements in hazard description and evaluation, contributions to advancements in modelling strategies (complex and simplified) with specific attention to steel structures, steel-concrete composite and hybrid structures, and base-isolated structures, contribution to advancements in data processing for the purpose of structural condition-based assessment.

Enterprise relationships: Producers of sensors for structural monitoring (development and testing)

Sources of funding: European Union, Italian Ministry of University and Research, Public and Private Companies involved in the management of buildings and infrastructures

International collaborations: University of California San Diego, University of California Davis, Oregon State University, Stanford University, Rice University, Louisiana State University, University of Strathclyde, University College of London, RWTH Aachen, Hasselt University, University of Thessaly

National networks: FABRE Consortium, ReLUI Consortium, STRIC

