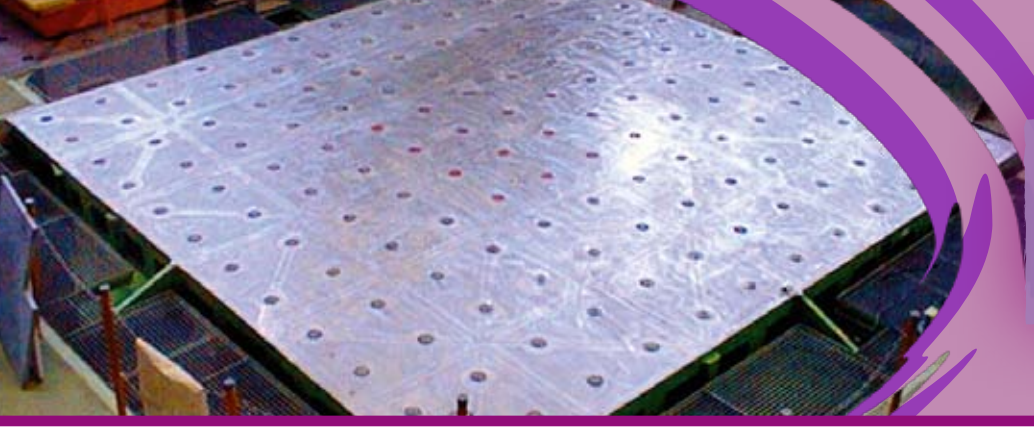

SERIES: Seismic Engineering Research Infrastructures for European Synergies

Major investments have been made in seismic engineering research over recent years. However, this has not bolstered yet the efficiency of research facilities and human resources in this area. There is no hub for seismic engineering research nor is there the infrastructure to share research and resources across Member States. To strengthen European seismic research, SERIES aims to build links among and with the major European players in the field as well as with key international partners such as the USA and Japan.

UNDERSTANDING EARTHQUAKES

Seismic engineering is key to protecting lives and property in case of an earthquake. Better understanding earthquakes' impact on the structural integrity of buildings, bridges and other civil engineering structures can help engineers design and build safer, more earthquake-resistant structures and mitigate the risk of damage.

SERIES is working to bring together Europe's disparate seismic engineering research facilities including eight reaction wall pseudodynamic facilities, 10 shake table labs, bearing and isolator test centres, two major centrifuge facilities and an instrumented site for wave propagation studies. Through a series of networking, coordinated transnational and joint research activities, SERIES is building a strong European seismic engineering research infrastructure, giving researchers from across Europe access to the best facilities.

SERIES' networking activities are fostering a culture of cooperation among the various teams and centres active in European earthquake engineering. In particular researchers are developing a distributed database of test results, creating standards, protocols and criteria for qualification in RTD earthquake engineering and increasing coordination and collaboration with national, European and international research initiatives.

SEVENTH FRAMEWORK PROGRAMME

EUROPEAN COMMISSION

BRINGING TOGETHER EUROPE'S BEST

Through coordinated transnational access, researchers will have access to world-class seismic engineering facilities including:

- the EU's four largest earthquake shaking tables in France, Italy, Portugal and the UK
- the EU's largest reaction wall and pseudodymanic testing facility at the Joint Research Centre
- the centrifuge test facilities in France and the UK.

Joint research through SERIES is working to find new fundamental technologies and techniques that promote efficient and joint use of seismic engineering infrastructure. In particular, joint research will focus on three areas: concepts and technical requirements which will lead to high-performance, enhanced-quality testing; new instrumentation and sensor techniques for better sensing and control during testing; and new techniques for the study of dynamic soil-structure interaction during earthquakes.

Together these activities will establish a seamless, sustainable platform of cooperation between European earthquake research infrastructures. This cooperation platform will include a corporate web portal which will provide education and dissemination materials and be a repository for scientific knowledge. In addition, a distributed database of experimental information will be created. The database will become one of the world's largest source of information on experimental earthquake engineering and provide real-time access to data generated during experiments.

Project acronym: SERIES
Funding scheme (FP7): Integrating Activities (IA)

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EU project officer: Agnès Robin

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Completion date: 28 February 2011

Partners:
University of Patras (EL)
Aristotle University of Thessaloniki (EL)
Commissariat Énergie Atomique (FR)
Centro Europeo di Formazione e Ricerca in Ingegneria Sismica (IT)
Géodynamique et Structure (FR)
Technical University of Istanbul (TR)
Institute of Earthquake Engineering and Engineering Seismology (MK)
Commission of the European Communities.
Directorate General Joint Research Centre (BE)
Bogazici University (TR)
Laboratoire Central des Ponts et Chaussées (FR)
Laboratório Nacional de Engenharia Civil (PT)
Middle East Technical University (TR)
National Technical University of Athens (EL)
P&P LMC Srl (IT)
Technical University 'Gheorghe Asachi' of Iasi (RO)
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