MONITORING THE CULTURAL HERITAGE IN SEISMICAREAS

Organized by CERI - Centre for Research on Prediction, Prevention, and Mitigation of Geological Risks, and Department of Earth Sciences of Sapienza University of Rome

STATION VIEW

SAPIENZA Jniversità di Roma

Centro di Ricerca Previsione, Prevenzione e Controllo dei Rischi Geologici - Ambientali

About the School

The great development of land and infrastructure monitoring and control systems in recent decades has allowed the use of on-site and remote monitoring also for the protection of cultural heritage from the consequences of geohazards but also of human activities. Earthquake occurrence causes one of most relevant natural risk for the cultural heritage in many European countries, such as Italy, Greece and Cyprus, that which constitute the partnership of STABLE - "STructural stABiLity risk assessment" project, funded under Horizon 2020 Framework Program - MSCA Research and Innovation Staff Exchange (RISE) 2018. The relevance of exposure to seismic risk of cultural heritage is widely demonstrated both by the destructive effects of recent earthquakes on monuments, and by the historical information on the effects of seismic events of past centuries.

MSCA-RISE

tABiLity risk

During the summer school "Monitoring the cultural heritage in seismic areas" the following topics will be addressed:

- local seismic response (for sites where historical buildings and monuments are located);
- history of cartography of the risk to which the Italian cultural heritage is exposed up to the present day;
- foundations on the behavior of masonry structures;
- methods of investigation and monitoring of the subsoil and structures, with focus on monitoring by satellite platform;
- mitigation interventions and recent case studies.

The event is organized in cooperation with the "Centro Studi" of the National Council of Geologists, and lasts three days, two of which at the Sapienza University of Rome, and the third day in Rieti, which is dedicated to a technical visit to the historical city center (italian test site of the STABLE project). It will be also possible to attend a workshop on related topics (in Italian language) entitled "SIstema per la Simulazione dei DAnni da Terremoto (SIS-DAT)", that will be held at the Rieti, in the Sapienza headquarters.

CERI is a partner of the European project STABLE which supports financially this summer school.

The school is open to

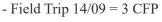
Participants and partners of the STABLE project; PhD and Master's degree students in Earth Sciences, Structural and Geotec.

Engineering, Earth Observation, Conservation of Cultural Heritage;

Professional Geologists and Engineers.

APC professional credits for Geologist:

- Summer School 12-13/09 = 10 CFP
- SISDAT 14/09 = 3 CFP



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IV Summer School

of STABLE^{*} project

H2020-MSCA-RISE-2018

TUESDAY, SEPTEMBER 12TH - Rome, Sapienza University, Department of Earth Sciences

Time	Speakere	Tonico		
IIme	Speakers	Topics		
10:00 - 10:30	Prof. Gianni Andreozzi, Prof. Gabriele	Event opening and		
10.00 10.00	Scarascia Mugnozza, Prof. Francesca Bozzano	institutional greetings		
	Session 1: Local seismic respor			
convener Prof. Francesca Bozzano (Sapienza University of Rome, Italy)				
	Salvatore Martino (Professor at Dept. of Earth	Engineering-geological models for		
10:30 – 11:30	Sciences at Sapienza University of Rome, Italy)	seismic response		
	Sciences at Sapienza Oniversity of Nonne, hary)	Seisime response		
11:30 – 12:30	Sebastiano D'Amico (Head of Department of	Geophysical investigations and		
	Geosciences at the University of Malta, Malta)	monitoring techniques		
12.30 - 14.00	Lunch break			
	Seminar: Introduction to the historical	risk maps		
convener Prof. Gabriele Scarascia Mugnozza (Sapienza University of Rome, Italy)				
	Ponzo Carlucci (Project manager at ALMA Sistemi	Historical dovelopment of cultural		
14:00 - 14:30	Renzo Carlucci (Project manager at ALMA Sistemi	Historical development of cultural		
	S.r.I., Italy)	heritage risk maps		
	Session 2: Seismic behavior of masonry	structures		
(convener Prof. Gabriele Scarascia Mugnozza (Sapienza			
		Improve the inspection and		
14:30 - 15:30	Vasilis Sarhosis (Professor of Resilient Structures	assessment of historic masonry		
	and Infrastructure at the University of Leeds, UK)	structures using Machine Learning		
		and High-Fidelity Models		
	Petros Christou/Prof. Paris Fokaides (Professors	,		
15:30 - 16:00	at the Dept. of Civil Engineering at Frederick	Masonry Structures: Modeling and		
		Vulnerability		
	University, Cyprus)			

WEDNESDAY, SEPTEMBER 13TH - Rome, Sapienza University, Department of Earth Sciences

Time	Speakers	Topics	
Session 3: Protective interventions on cultural heritage sites convener Prof. Salvatore Martino (Sapienza University of Rome, Italy)			
10:00 - 11:00	Haris Saroglou (Dept. of Geotechnics, School of Civil Engineering National Technical University of Athens, Greece)	Protection of Cultural Heritage sites from rock slope instabilities, examples from Greece	
11:00 - 12:00	Sebastiano Rampello (Professor of Geotechnical Engineering, Sapienza University of Rome, Italy)	Cultural Heritage monitoring in urban areas	
12:00 – 13:00	Maurizio De Angelis (Professor at Dept. of Structural and Geotechnical Engineering at Sapienza University of Rome, Italy)	Anti-seismic solutions in historical- monumental areas	
13.00 - 14.00	Lunch break		

Session 4: Monitoring of Cultural Heritage sites convener Prof. Stefano De Angeli (Tuscia University, Italy)

14:00 – 14:30	Dimitris Alexakis (<i>Researcher at the Institute for</i> <i>Mediterranean Studies Foundation for Research</i> <i>and Technology Hellas, Greece</i>)	Using Interferometry Techniques for mapping ground motions in urban environments
14:30 – 15:30	Marco Savoia (Director of the Interdepartmental Center for Industrial Research on Building and Construction, Professor at the University of Bologna, Italy)	Italian guidelines on the satellite interferometric monitoring to infer structural behavior of buildings
		Remote monitoring of cultural heritage in Italy

Presentation of "STABLE" WebGIS Platform convener Prof. Stefano De Angeli (Tuscia University, Italy)

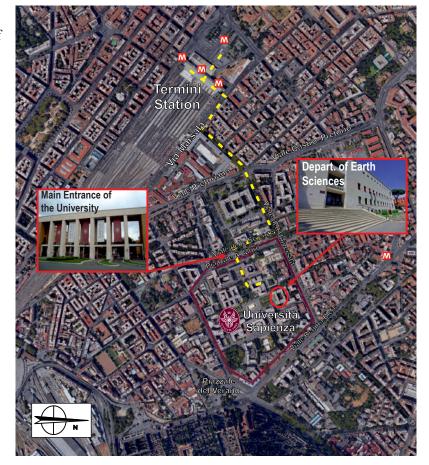
16:00 - 16:30	Stavros Chlorokostas (<i>R</i> esearcher at GEOSYSTEMS HELLAS S.A., Athens, Greece)	STABLE WebGIS Platform
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VENUE

The lessons will be held at the Department of Earth Sciences of Sapienza University of

- Address: Piazzale Aldo Moro 5, 00185 Rome, Italy
- **Building:** CU005 (Mineralogia)
- Room: Aula Lucchesi, ground floor 9

HOW TO REACH US



THURSDAY, SEPTEMBER 14TH - Rieti

Time	Location	Event	Speakers
10.00 – 13.00	University of Rieti	Workshop: SIS-DAT (in Italian language)	Prof. Martino S., Prof.ssa Bozzano F., Prof. Liberatore I Prof. De Angelis M., Ing. Buffarini G., Dott. Martini G., Dott. Peloso A., Dott. Filippone R., Dott. Di Iorio A.
13.15 – 14.30		Lunch break	
14.30 - 17.30	Rieti city center	Field Trip of STABL	E project Prof. Martino S., Prof.ssa Bozzano F., Prof. Liberatore D., Prof. De Angelis M.

VENUE

The event SIS-DAT will be held at Rieti University

- **Address:** Via Cintia, 106, 02100 Rieti, Italy
- **Building:** Main Entrance 9

Room: TBD

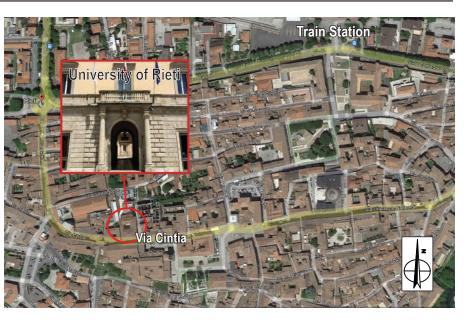
Important to know:

- the transport to Rieti will be organized only for the participants of the STABLE project;

- the lunch of 14th September in Rieti will be offered only for the participants of the STABLE project.

Get in Touch

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