

Summary:

A Special Session by the COSMOS Site Characterization working group entitled “Site Characterization and Site Response Modeling: COSMOS Working Group, State of the Art, Future Challenges, and Implications for Seismic Risk Mitigation” was held on 9 November 2023 as part of 7ICEES/18WCSI joint conferences in Antalya, Turkiye, during November 6-10, 2023. The session program and select photos from the session are presented below. The nine talks were held by an international community and included state-of-the-art findings on site characterization, site response, high frequency attenuation, effect of site effects on seismic damage and recent recommendations for seismic station installations.

In addition to the program below, Prof Hiroaki Yamanaka was a theme speaker at the conference invited by the COSMOS SC WG. He presented on Temporary Strong Motion Observation in Damaged Areas of the 2023 Kahramanmaras Earthquakes with a Focus on Local Site Effects.

A major potential action item which clearly emerged from this session was the anticipation of continuous knowledge and technology transfer in the form of an online forum on site characterization and site response. In addition, a future direction of the COSMOS SC WG is agreed to be the assessment of station installation conditions for high-quality seismic recordings.

We thank all of the speakers and participants of the session.

Aysegul Askan and Marco Pilz

PART 1		
Paper ID	Title	Authors
13474	OBTAINING SITE EFFECT-FREE HARD-ROCK TIME SERIES FROM THE GENERALIZED INVERSION TECHNIQUE	MARCO PILZ , FABRICE COTTON, CHUANBIN ZHU, KENICHI NAKANO, HIROSHI KAWASE
13978	OUT OF THE TRASHCAN & INTO THE PROJECT: RENDERING SEISMIC RECORDINGS USABLE AT HIGHER FREQUENCIES THROUGH NOISE MODELING	OLGA K TENIDOU
13404	MAGNITUDE DEPENDENCY OF SPECTRAL DECAY PARAMETER (K) IN SIVRICE-PUTURGE SEGMENT RELATED EVENTS OF EAF	YESİM BİRO , BİLGE SİYAHİ, BÜLENT AKBAŞ
13615	EVALUATION OF MULTIVARIATE ADAPTIVE REGRESSION SPLINES FOR PREDICTION OF KAPPA FACTOR AROUND WESTERN TURKEY	TEVFİK ÖZGÜR KURTULMUŞ , FATMA YERLİKAYA-ÖZKURT, AYSEGUL ASKAN
14115	BEYOND SITE RESPONSE: ON THE IMPORTANCE OF INSTALLATION CONDITIONS (DEPTH, COUPLING, HOUSING...) ON THE QUALITY OF SEISMIC RECORDINGS	FABRICE HOLLENDER , PAULINE RISCHETTE, NIKOLAOS THEODOULIDIS, ZAFEIRIA ROUMEIOTI, VINCENT PERRON , PAOLA TRAVERSA

PART 2		
Paper ID	Title	Authors
13395	VS PROFILES FOR TURKEY	ALİ CEMİL SEN, ZEHRA CAGNAN
14116	FEEDBACK FROM THE CHARACTERISATION OF FRENCH (RAP AND RLBP) AND GREEK (ITSAK) SEISMOLOGICAL STATIONS: FOCUS ON IMPLEMENTED METHODOLOGIES	FABRICE HOLLENDER, NIKOLAOS THEODOULIDIS, PAULINE RISCHETTE, ISABELLE DOUSTE-BACQUE, MARGAUX BUSCETTÌ
13830	ESTIMATING SITE AMPLIFICATIONS FOR AN ENHANCED UNDERSTANDING OF GROUND MOTION EFFECTS IN NORTHWESTERN TÜRKİYE	GAMZE MURATOĞLU, AYSEGUL ASKAN
14420	IMPORTANCE OF SITE EFFECTS ON THE SPATIAL DISTRIBUTION OF DAMAGES DURING THE 2019 LE TEIL (FRANCE) EARTHQUAKE	CORNOU CECILE, MALEK AL JAMAL, AUREORE LAURENDEAU, JULIE REGNIER, DIEGO MERCERAT, MARC EDWARD CUSHING, CELINE GELIS, MATHIEU CAUSSE, SEBASTIEN HOK, ROUBA ISKANDAR, PHILIPPE LANGLAUDE

Session Flyer:

SPECIAL SESSION	CO-CONVENERS	INVITED SPEAKERS
<p>Site Characterization and Site Response Modeling: COSMOS Working Group, State of the Art, Future Challenges, and Implications for Seismic Risk Mitigation</p> <p>Seismic site characterization is a key topic where earth sciences interface with engineering and other disciplines, and whose accuracy and precision affect all seismic resilience efforts worldwide. The damage patterns observed during the recent 6 February 2023 Kahramanmaraş earthquakes also highlighted the significance of site characterization and site response studies for seismic resilience of urban regions. An ongoing effort to bring together members of the international community by the Consortium of Organizations for Strong Motion Observation Systems (COSMOS) since 2015 has produced international guidelines on site characterization best practices, which appropriately inform downstream site response studies. This session invites studies from, but not limited to, site characterization using active- and passive-source methods, site response analyses including applications related to recent earthquakes, nonlinearity modeling, regional and site-specific considerations for ground motion model development, ground failure issues such as coseismic liquefaction, and seismic building code considerations. We welcome a broad range of studies involving geological, geophysical, and geotechnical aspects.</p>	 Aysegul Askan  Marco Pilz  Sebastiano D'Amico  Sean Ahdi	<ul style="list-style-type: none"> ▶ Alan Yong (USGS) ▶ Marco Pilz (GFZ Potsdam) ▶ Sean Ahdi (USGS) ▶ Olga Ktenidou (NOA) ▶ Hiroaki Yamanaka (Tokyo Tech) ▶ Sebastiano D'Amico (University of Malta) ▶ Cecile Cornou (ISTERRE / IRD / Univ. Grenoble Alpes) <p>This Special Session is presented by COSMOS Site Characterization Working Group</p> <p> www.18wesi-7icees.com  info@18wesi-7icees.org</p>

Photos from the Session:





