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Consortium of Organizations for Strong Motion Observation Systems

16WCEE Special Session:
Working Group on Noninvasive Site
Characterization Guidelines
and
Joint IAEE/COSMOS International Strong
Motion Committee

Friday January 13, 2-4pm

Farellones II Room



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Session Outline

- Update on the Noninvasive Site Characterization Guidelines (~1hr)
 - Update
 - Presentation
 - Discussion
- Update on COSMOS Strong Motion Forum (~1hr)
 - IAEE/COSMOS Joint International Committee Formalized
 - COSMOS Network Wiki Forum
 - COSMOS VDC and strongmotioncenter.org
 - Discussion



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IAEE Approved Joint Committee

- The Joint IAEE/COSMOS International Strong Motion Committee established
- Prof. Masayoshi Nakashima agrees to serve as the IAEE nominee to this committee
- This is the first official meeting of the committee.



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IAEE Joint Committee Objectives

1. Bring together worldwide strong motion network operators to increase data awareness, discuss common issues, and learn from each other.
2. Increase cooperation on data dissemination through new data portals and tools being developed worldwide and through the COSMOS Virtual Data Center search engine.



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IAEE Joint Committee Objectives

3. Bring together international strong motion network data providers and data users to collaborate on the development of standards and tools for collection and use of strong motion data.
4. Facilitate the exchange of information on the availability and use of strong motion data by practicing design engineers (e.g. COMOS Annual Technical Sessions, Wiki Forums pages).



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Initially Committee Membership

- Open to participation in committee activities by all who are interested and motivated by our objectives
- Need to select Chair, Co-Chair, Secretary
 - IAEE Committee rules
 - Suggestions/Nominations?



COSMOS



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New Web-Based Communication Tool

- COSMOS Wiki/Forums Page

<http://cosmos.eri.ucsb.edu>

- Individual Network Pages with Information and Links back to each Network
- Events & News items
- Bulletin Board Style Forum pages



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COSMOS

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Network Forums

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Lateral spreading caused irreparable damage across two lane roadway, courtesy of EERI



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Upcoming Events

About the COSMOS Network Forums: These web pages have been built to improve and increase the communication between the strong motion network operators around the globe, and to increase the communication between the operators and the data users.



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Upcoming Events

16WCEE Strong Motion Forum
Fri, 01/13/2017 - 2:00pm

Past Events

2016 COSMOS Technical Session
Fri, 11/18/2016 - 7:30am

ESC 2016 COSMOS Workshop
Mon, 09/05/2016 - 6:00pm

2015 COSMOS Technical Session
Fri, 11/13/2015 - 8:00am

2014 COSMOS Technical Session
Fri, 11/14/2014 - 8:30am

COSMOS Strong Motion Forum
@ 10NCEE
Tue, 07/22/2014 - 1:30pm

10NCEE in Anchorage July 21-25,
2014
Mon, 07/21/2014 - 8:00am

COSMOS Technical Session
Fri, 11/22/2013 - 7:30am

COSMOS 2012 Strong Motion Forum
Tue, 09/25/2012 - 5:15am

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About COSMOS: The Consortium of Organizations for Strong- Motion Observation Systems (COSMOS) was established in 1999, under the guidance of the Committee for the Advancement of Strong Motion Programs (CASMP; C. Stepp, chairman) with the support of the National Science Foundation and charter endorsement by the California Division of Mines and Geology, the U.S. Geological Survey, the U.S. Bureau of reclamation, and the U.S. Army Corp. of Engineers.

Our Mission is to advocate for the establishment of strong- motion measurement systems; to promote development and adoption of verifiable, internationally-ranked standards for the acquisition and processing of earthquake strong-motion measurements; and to promote the global application of strong- motion measurements by design professionals.

Networks



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Networks

Continent

- Any -

Select a continent

CGS SMIP



The California Strong Motion Instrumentation Program (CSMIP) was established in 1972 by California Legislation to obtain vital earthquake data for the engineering and scientific communities through a statewide network of strong motion instruments. When the planned network is completed, statewide coverage will ensure that strong ground motion for any moderate to larger size earthquake in the state will be recorded.

French Accelerometric Network



Réseau Accélérométrique Français National Data Center (RAP-NDC) provides data and information related to accelerometric data for research activities, technical development or education.

IG N STRONG-MOTION NETWORK

COSMOS

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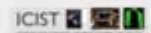
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ICGC



The functions that the Institute exercises are, among many others: to elaborate the geological map of Catalonia, in various scales, and carry out mapping software, databases and information systems about soil and subsoil; to develop and maintain the seismic network; to study and assess the geological risks, including earthquake and avalanche risk; to develop and promote work, studies and evaluations in the field of geology and its related sciences; to advise and provide technical assistance in the field of geology and disciplines related to DPTOP, other departments and other administrations

ICIST



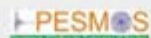
ICIST (Institute for Structure Engineering, Territory and Building Technologies) is a research unit based at IST (Instituto Superior Tecnico), in Lisbon. Through NESS, its Earthquake Engineering and Seismology Group, ICIST is concerned with studies of seismicity, seismic risk and seismotectonics, with emphasis on mainland Portugal and the Azores. In addition, the research goals of NESS include experimental studies of the seismic behaviour of concrete and masonry structures, base isolation systems, etc.

IEM



Institute of Engineering Mechanics (IEM), China Earthquake Administration

Indian National Strong Motion Instrumentation Network



The Department of Earthquake Engineering is the only one of its kind in India and amongst a few in the world. Established in 1960 as School of Research and Training in Earthquake Engineering, the department has been actively engaged in teaching, basic and applied research, and providing consultancy services in the seismic design of almost all major engineering projects in the country, with an aim of mitigating disasters caused by earthquakes. These include nuclear power plants, major dams, bridges, petrochemical and other industrial complexes and multistoried buildings.

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Instrumentation Network



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Institute of Engineering Mechanics (IEM),
China Earthquake Administration

IEM was progressively adjusted to meet the demands of national construction and made important contributions to the country.

Especially in the field of earthquake engineering, IEM is the pioneer in China almost in all aspects. It has attained a series of great achievements and contributed significantly to the economic development of the country. The institute is the only academic institution in China concentrating mainly on the study of Earthquake Engineering and has gained international prestigious recognition.

Website Link: [English Overview](#)

15 WCEE Presentation Document: [15wcee_China.ppt](#)



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Search

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SEARCH

Who's online

There are currently 0 users online.

Site Characterization Questions

View Forums Active topics Unanswered topics

Questions			
Forum	Topics	Posts	Last post
 General Q&A	1	1	16WCEE Strong... by jamie 10/04/2016 - 3:49pm
 Instrumentation Questions	0	0	n/a
 Data Processing Questions	0	0	n/a
 Site Characterization Questions	0	0	n/a

Research



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Updates on COSMOS VDC

- 2017/2018 redesign of backend database technology at StrongMotionCenter.org
- Merge database from EDC and VDC into a single database
- Still provide EDC and VDC views of this database
- Provide ability for WebServices (Programatic interface to database) as well as the traditional point/click GUI interface



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Updates on COSMOS VDC

- WebServices to provide better data and metadata exchange capabilities between networks
- Improve output format consistency for data download
- Expand options for data formats delivered through COSMOS Converter tool
- Expand on tools for strong motion processing and analysis (New USGS PRISM GUI tool)



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Final Thoughts

15WCEE SMF Resolution

“Timely dissemination of Worldwide Ground and Structural Strong Motion data to the earthquake engineering and seismological community is critical to improving our resiliency to earthquakes and to improving life safety of the built environment.”