The Geology Symposium Mission is to improve communication and consistency in the application of geologic and hydrogeologic data by providing state geologists opportunities to share information, experiences and resources. To help achieve this Mission the GeoSym16 Planning Committee is pleased to provide the schedule and announce our speakers of this webinar:

**Wednesday October 5, 2016 from 9:30 AM to 11:45 AM**

**Speakers and Schedule**

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<tr>
<th>Time</th>
<th>Topic</th>
<th>Speaker</th>
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<tr>
<td>9:30-9:40</td>
<td>Introductions</td>
<td>John Naginis</td>
<td>10 min.</td>
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<td>(State Water Board)</td>
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<td>10:20-10:50</td>
<td>Assessment and mitigation of landslides and debris flows for buildings and vulnerable populations</td>
<td>Bob Sas</td>
<td>30 min.</td>
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<td>(AECOM)</td>
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<tr>
<td>10:50-10:55</td>
<td>Break</td>
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<td>5 min.</td>
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<td>10:55-11:40</td>
<td>Fire, Earth &amp; Rain: Emergency Response for Wildfire-Induced Landslide Hazards</td>
<td>Jerome De Graff</td>
<td>45 min.</td>
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**WEB ACCESS**
Join as an Attendee (no password required):
https://stateofcaswrcbweb.centurylinkccc.com/CenturylinkWeb/LaurentMeillier
Mute your phone by dialing *6 after connecting.

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Dial-in (U.S.): USA: 1-720-279-0026
USA /Canada (toll free): 1-877-820-7831
Access Code: 4918355
Seismic and Acoustic Monitoring of Yosemite Rock Falls

Seismic and infrasound sensors were deployed at a historically active cliff in Yosemite Valley for the purpose of detecting and locating rock falls at local (<1 km) distances and to demonstrate the potential for using these techniques for real-time rock fall monitoring. Small (<20 m³) rock falls are detectable at distances of several hundred meters, individual impacts can be identified, and seismic waves are sometimes generated prior to the first main impact. Infrasound monitoring complements the seismic network, especially for locating events. A major part of the research effort was the development of a triggering algorithm and criteria for distinguishing rock falls from thousands of seismic triggers. Twelve rock falls were identified in the continuous seismic recording by searching for triggers and comparing them with known rock falls and other forms of seismic activity. Physical evidence or reports of rock falls exist for only eight of the twelve rock falls that we identified; thus, we have demonstrated that instrumented monitoring can significantly augment the detection of rock falls even in heavily-trafficked areas such as Yosemite Valley. In addition, a large (46,700 m³) rock fall occurred 5 km away from the monitoring network. This rock fall was well-documented using a combination of repeat LIDAR surveys, repeat high-resolution photography, and seismic and acoustic monitoring. From these data sources, we were able to reconstruct the event dynamics and talus properties before and after the rock fall.
Valerie Zimmer has been working in the Instream Flow Unit at the State Water Board for the past year, helping to develop flow requirements in streams that are critical for Pacific Salmon. Valerie is diving into hydrology, water resources, ecology, and water policy for the first time in her career, and finds it intellectually-stimulating, challenging, and exciting to be involved with developing scientifically-sound and sustainable water policy for California’s streams. Valerie completed a PhD at the University of California, Berkeley, studying the seismic signatures of rock falls in Yosemite. She spent 2 years as a lecturer and researcher in Engineering Geology at the University of Canterbury, New Zealand and was involved with projects in New Zealand ranging from landslide hazard evaluation, to post-earthquake geotechnical assessments, to earthquake fault gouge testing, to assessing the mechanical properties of geothermal reservoirs. She has worked in the defense industry assessing rock mechanical properties using percussion drilling and in the oil industry as a wireline geophysical logging engineer. Valerie is interested in networking and sharing ideas with California Engineering Geologists and is honored to be a part of the Geosymposium.
Integrated Geotechnical-GIS Modeling and Terrain Mapping using Airborne LiDAR Data for Landslide Hazard Assessment in Hong Kong SAR, PRC

Hong Kong has some of the most-densely populated urban areas in the world directly abutting steep, mountainous terrain in a humid-(sub) tropical climate with annual rainfall that can exceed 100in/yr. These conditions resulted in significant losses of life and property in the 1970s, including collapses of high-rise residential buildings, that led to an ongoing effort by local government to reduce the risks of landslides. The practice of terrain mapping for landslide hazard assessment has evolved significantly since geologists began these efforts over four decades ago, and the introduction of a region-wide airborne LiDAR dataset has had a notable recent impact on these developments. Some tried-and-true, manual mapping approaches will be presented along with complementary, computer-automated approaches. The integration of conventional desk study and field mapping approaches with remote sensing and geotechnical-GIS modeling provides practitioners with a repeatable, reproducible framework to benchmark and compare landslide hazards across multiple sites. Simulated landslide hazard zonation maps, with probabilities of sliding and terrain classification metrics embedded, can be qualitatively or quantitatively deployed from the earliest to latest phases of a study.
Bob Sas – Biography

Bob Sas is an internationally-qualified geologist specializing in engineering geomorphology and terrain mapping for landslide hazard assessment. During his studies at James Madison University and San Francisco State University, he contracted with the USGS on landslide studies, was a land survey technician for a USGS-NHERP funded project, and served as a National Park Ranger. After his studies, Bob was a field camp teaching assistant in Ireland, an intern at Cotton, Shires & Associates in Los Gatos, and a rockfall geoscientist in Yosemite National Park. In 2010, he was deployed by Fugro-William Lettis & Associates to Hong Kong, where he was instrumental in launching airborne LiDAR applications across HK’s geotechnical industry, most notably in the arena of natural terrain landslide hazard assessment. Based on his experience and reputation, Bob was one of 6 technical reviewers of the revised Hong Kong Government guidelines on landslide hazard studies and has been an invited speaker on LiDAR and GIS in the USA, Italy, Thailand, Hong Kong, and Malaysia. In August 2016, he joined AECOM’s Water Group in Sacramento as Project Geologist to service the growing needs for water infrastructure engineering and novel remote sensing studies for wildfire and geohazard management.
Fire, Earth & Rain: Emergency Response for Wildfire-Induced Landslide Hazards

Wildfire is a unique natural hazard because it poses immediate threats to life and property as well as creating conditions that can lead to subsequent debris flows and accelerated rock fall. This is a significant problem in the western U.S. where large wildfires have become more frequent since the mid-1980s. Limiting the impact of these post-fire geologic hazards requires determining their likelihood and location within the burned area. A rapid assessment is needed to ensure mitigation measures can be implemented prior to an initiating rainfall event.

Jerry De Graff – Biography

During most of his 36 years in the US Forest Service, Jerome (Jerry) De Graff served in positions designated as being either an environmental or engineering geologist on National Forests in Utah and California. In those capacities, he collected and interpreted geologic information needed for sustainable development, multiple-use management of natural resources, and emergency response. Jerry acted as the inhouse geologist providing information about geomorphic processes, groundwater conditions, and other relevant geologic conditions. During his last 6 years, he was a Forest Service On-Scene Coordinator for Superfund-type issues and responses at abandoned mines and other Forest Service sites in California. Since retiring from government service in February 2014, Jerry continues his geology career teaching graduate courses for the Department of Earth & Environmental Science at California State University-Fresno, acting in editorial and related capacities for various professional journals, and being active in professional organizations.

During his geology career, Jerry has been active in professional organizations; notably the Geological Society of America (GSA) and the Association of Environmental & Engineering Geologists (AEG). He joined GSA in 1972, was made a Fellow in 1983, and served as Councilor from 2006-2010. In addition to holding the Chairmanship and other leadership positions in GSA’s Engineering Geology Division, Jerry received their Meritorious Service award in 1997 and in 2011. He was honored to receive their Distinguished Practice Award in 2004 Jerry De Graff, MS
Jahns Distinguished Lecture
Association of Environmental Engineering Geologists and the GSA
Engineering Geology Division
joined AEG in 1980 and chaired their Committee on Landslides from 1984 to 1995. He received presidential citations in 1995 and 2013 in appreciation for his service to AEG. Jerry is presently vice-Chair of the San Joaquin Valley Chapter in AEG’s Sacramento Section. A native of the Finger Lakes region of upstate New York, Jerry graduated from the State University of New York-Geneseo with a BS in Education/Earth Science. He continued to take geology courses there for six years while working full-time. During the last five years while an instructor at the Strasenburgh Planetarium (Rochester, NY), he realized he was too interested in what was beneath his feet to continue talking about what was happening among the stars. So Jerry and his wife moved west where he earned an MS in Geology from Utah State University. A job offer from the US Forest Service after a year as a USU researcher seemed more attractive than his original goal of returning east to teach in a community college, so he took it and never looked back.

While not hired as a researcher for the US Forest Service, Jerry often undertook extended studies in order to generate needed geologic information. Other opportunities to gain geologic information occurred during overseas assignments in the Caribbean, Thailand, and Italy. When the results seemed interesting, he would make an effort to share the information in publications or through presentations at conferences. Consequently, he has authored or co-authored more than 60 contributions to journals, books, and proceedings volumes. With Dr. Robert B. Johnson, he co-authored the textbook, Principles of Engineering Geology, which was awarded GSA’s E.B. Burwell Jr. Memorial Award in 1989 and AEG’s Claire P. Holdredge Award in 1990. In 2010, Jerry received the annual AEG publication award for the paper, “The formation and persistence of the Matthieu landslide-dam lake, Dominica, W.I.”, published in the journal, Environmental and Engineering Geoscience.

The Jahns Distinguished Lectureship, established in 1988, is sponsored by the Association of Environmental and Engineering Geologists and the GSA Engineering Geology Division. Its purpose is to provide funding for distinguished engineering geologists to present lectures at colleges and universities in order to increase awareness of students about careers in engineering geology. The lectureship is named in honor of Dr. Richard H. Jahns (1915-1983), an engineering geologist who had a diverse and distinguished career in academia, consulting and government.