



# FEMA

## Oct 6 FEMA P-2090/NIST SP-1254 Webinar

10/04/2021



**Samueli**  
School of Engineering



**Save the Date**

**October 6, 2021 – FEMA P-2090/NIST SP-1254 Webinar**

*Recommended Options for Improving the Built Environment for Post-Earthquake Reoccupancy and Functional Recovery Time*

**12 Noon to 1 pm (Pacific Time)**

[Register Here](#)

The American Society of Civil Engineers Infrastructure Resilience Division and the UCLA Samueli School of Engineering are hosting the **Lifelines 2021-22** conference. Conference activities were launched on Feb. 9, 2021, to commemorate the 50th anniversary of the San Fernando Earthquake. This was followed by an Energy Sector Panel session in April 2021 and a Transportation Sector Panel Session in June 2021. Prior to the in-person conference on Jan. 31 to Feb. 4, 2022, we are holding additional activities throughout the 2021 calendar year related to the conference theme of Understanding, Improving, and Operationalizing Hazard Resilience for Lifeline Systems. The severe impacts of the 1971 earthquake inspired research of lifeline systems worldwide, including water, wastewater, stormwater, electric power, gas and liquid fuels, communications, transportation, and solid waste management systems.

As part of the Lifelines 2021-22 conference event series, FEMA is hosting a webinar focusing on post-earthquake reoccupancy and functional recovery. This event will include four speakers giving an overview of the congressional mandate to address reoccupancy and functional recovery, what this potentially means to the design and operation of buildings and lifeline infrastructure systems, and societal planning, education, and financing. The event will be held virtually on Wednesday, Oct. 6, 2021, from noon to 1 p.m. Pacific Time. For more information on the webinar and conference please visit <https://samueli.ucla.edu/lifelines2021-22/>.

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FEMA P-2090/NIST SP-1254, *Recommended Options for Improving the Built Environment for Post-Earthquake Reoccupancy and Functional Recovery Time*

Current codes and standards for buildings and lifeline systems are primarily safety-based intending to protect life and public health, with few provisions targeting post-event recovery objectives. Most of the existing built environment does not comply with current codes and standards. As a result, the United States is exposed to significant risk from all forms of natural hazards that can affect communities through damage that results in injury and loss of life, lifeline service interruptions, displacement of residents, closure of businesses, and other economic and socio-cultural impacts. These risks cannot be eliminated but the resilience of our communities can be significantly improved by implementation of recovery-based codes, standards, and other policies. This webinar will present recommendations for (1) design and construction practices to improve the performance of lifeline infrastructure systems and buildings, and for (2) the planning and education activities and financial resources needed to implement these design and construction practices. These recommendations are described in the recently published FEMA P-2090, NIST SP-1254 report that was mandated by the 2018 reauthorization of the National Earthquake Hazards Reduction Program (NEHRP), P.L. 115-307. The webinar speakers served as primary authors of the report.

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## Agenda

Welcome: Ronald T. Eguchi |*CEO and Co-Founder at ImageCat, Inc.*

NEHRP Mandate and Acknowledgements: Michael Mahoney |*Senior Geophysicist at FEMA*

Buildings Presentation: Ryan Kersting |*Associate Principal/Structural Engineer at Buehler*

Lifelines Presentation: Craig Davis |*CA Davis Engineering, Retired LADWP*

Planning, Education, Financial Presentation: Lucy Arendt |*Professor at St. Norbert College*

Closing: Ronald T. Eguchi

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# Speaker Biographies

## Michael Mahoney

Michael Mahoney is a Senior Geophysicist with the Federal Emergency Management Agency, a position he has held for over 36 years. He currently leads FEMA's seismic problem-focused studies and has investigated a variety of earthquake-related issues to develop design and construction guidance under the National Earthquake Hazards Reduction Program (NEHRP). He is currently leading FEMA's efforts on functional recovery and our recently published Report to Congress, *Recommended Options for Improving the Built Environment for Post-Earthquake Reoccupancy and Functional Recovery Time* (FEMA P-2090 / NIST SP-1254). His list of projects includes the development of FEMA's seven volume *Performance-Based Seismic Design Guidelines* series (FEMA P-58), *Example Application Guide for ASCE/SEI 41-13 Seismic Evaluation and Retrofit of Existing Buildings* (FEMA P-2006), and *Seismic Evaluation of Older Concrete Buildings for Collapse Potential* (FEMA P-2018). Mr. Mahoney is also responsible for FEMA's earthquake-related work with the International Codes and has been involved in the nation's model building code development process since 1984. He has investigated building performance in disasters dating back to Hurricanes Hugo and Andrew and the Northridge earthquake. In 2018 he was awarded the Alfred E. Alquist Special Recognition Medal and in 2020 he received an honorary membership in the Structural Engineers Association of Northern California.



## Ryan Kersting

Ryan Kersting is a licensed California Structural Engineer and is an Associate Principal at Buehler in Sacramento, where he serves as the in-house technical expert on building codes, structural standards, innovative solutions, and emerging trends within the industry. He has served on multiple technical and professional committees for SEAOC, NCSEA, ASCE, ATC, NEHRP, and other organizations and is dedicated to improving building performance and promoting the profession to the public. He serves on the Advisory Committee for NEHRP, and is co-chair of the SEAOC Policy Committee, through which he has been the lead advocate for California Assembly Bill 1329 that would bring functional recovery provisions to the California Building Code.



## Craig Davis

Craig A. Davis, Ph.D., PE, GE is a professional consultant on geotechnical, earthquake, and lifeline infrastructure system resilience engineering. In his three-decade long career at the Los Angeles Department of Water and Power, Davis worked as the Departmental Chief Resilience Officer, Seismic Manager, and Geotechnical Engineering Manager. There he developed a comprehensive L.A. Water System resilience program. He has more than 180 technical publications and investigated numerous earthquakes. He has served on professional committees, including the Building Seismic Safety Council, the National Earthquake Hazards Reduction Program Advisory Committee on Earthquake Hazards Reduction, and ASCE Infrastructure Resilience Division. Davis has been honored with the ASCE 2016 Le Val Lund Award for Practicing Lifeline Risk Reduction, 2020 Charles Martin Duke Lifeline Earthquake Engineering Award, and 2021 EERI Distinguished Lecture Award. He received a B.S. from the California Polytechnic State University in San Luis Obispo and an M.S. and Ph.D. from the University of Southern California, all in civil engineering. Dr. Davis was the founding chairperson for the ASCE Infrastructure Resilience Division and serves as the Lifelines 2021-22 Conference Co-Chair.



## Lucy Arendt

Lucy Arendt, Ph.D. is a Professor of Management in the Donald J. Schneider School of Business and Economics at St. Norbert College. She received her Ph.D. in Management Science from the University of Wisconsin-Milwaukee. Her scholarship focuses on how leaders perceive and address risks associated with disasters and how organizations and communities engage in long-term recovery and resilience-building.



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