ASCE | INFRASTRUCTURE RESILIENCE   **UCLA**

San Fernando Earthquake Conference – 50 YEARS OF LIFELINE ENGINEERING
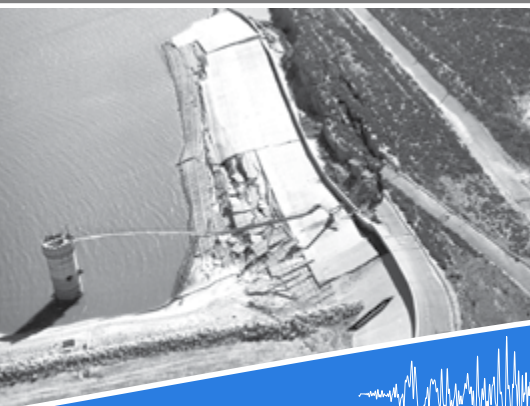
Los Angeles, California USA | February 7-10, 2021

Understanding, Improving & Operationalizing Hazard Resilience for Lifeline Systems

Join Us in Los Angeles in 2021!

On behalf of the Program Committee, you are cordially invited to participate in the San Fernando Earthquake Conference on Lifeline Earthquake Engineering, to be held February 7-10, 2021.

1971

lifelines2021.ucla.edu
University of California Los Angeles

About the Conference

The ASCE Infrastructure Resilience Division (IRD), in partnership with The University of California, Los Angeles (UCLA), is pleased to announce the San Fernando Earthquake Conference – 50 years of Lifeline Engineering (Lifelines2021), focusing on "Understanding, Improving & Operationalizing Hazard Resilience for Lifeline Systems."

The February 9, 1971 San Fernando California Earthquake was a devastating yet seminal event which, for the first time, demonstrated the seismic threat to lifelines that fundamentally support our modern livelihoods. Knowledge gained from this event initiated the study of lifeline systems world-wide, including water, wastewater, electric power, gas and liquid fuels, communications, transportation, and solid waste management systems. The founding efforts of the ASCE Technical Council on Lifeline Earthquake Engineering, a predecessor unit to the current IRD, by international leaders like the late Charles Martin Duke from UCLA established lifeline systems into a mainstream discipline, now accepted as fundamental for community and regional resilience.

The 50th anniversary of the San Fernando Earthquake is an opportunity to reflect on the need to increase the resilience of our critical infrastructure systems to earthquakes and other hazards. The conference will provide a retrospective of where we are today and how we got here, and help define a global vision for where we are going to create resilient infrastructure systems within interdisciplinary and multihazard environments which support community and regional resilience. These encompass the conference goals.

ASCE's Infrastructure Resilience Division was established in 2014 to develop a unified approach in advancing the concepts of resiliency within lifeline and infrastructure systems. The Infrastructure Resilience Division develops resources for improving the resilience of civil infrastructure and lifeline systems to all hazards.

Committee activities focus on the following technical topics:
- Community Resilience
- Disaster Assessments
- Emerging Technologies
- Civil Infrastructure and Lifeline Systems
- Multi-Hazard Characterization
- Risk and Resilience Measurements
- Social and Economic Impacts

IRD Vision: Improve the resilience of civil infrastructure and lifeline systems.

IRD Mission: Serve the civil engineering profession in advancing civil infrastructure and lifeline systems for local, regional, and national resilience against all hazards.

The University of California, Los Angeles (UCLA) is a world-class university renowned for extraordinary student selectivity, research excellence, community impact, and athletic prowess. Nearly one million people visit the historic campus every year for educational opportunities, cutting-edge medical care, cultural events, and athletic competitions. The Civil & Environmental Engineering Department in the Samueli School of Engineering is hosting the conference.

The conference will be held on the UCLA campus at the Meyer and Renee Luskin Conference Center and the Ackerman Grand Ballroom.

Mark your calendars and submit your abstract now!

You are invited to submit an abstract to any of the technical tracks listed. Submitted abstracts must meet the following requirements:

- **Abstracts** may be submitted in MS Word for proposed presentations, papers, or sessions and are expected to be between 100 to 400 words. They cannot contain images,tables, or other graphic elements.
- **Presentation Only** Abstracts, the submission is to be made by the presenter. Upload an abstract describing the proposed presentation.
- **Paper Abstracts,** the submitting author should upload the abstract, draft and final versions of the paper, respond to review comments,and identify the author to present the paper at the conference. Accepted papers will be published in the conference proceedings.
- **Session Abstracts,** the submitting author should be the person who will organize the 90-minute session, including selection of session format and identification of speakers. Format may include technical speakers, panel or round table discussion. Speakers in proposed sessions may also submit a paper, which must follow the paper submittal process outlined in this call. The Program Committee may work with the submitting authors as appropriate to merge similar or related sessions.
- **Submissions must** include the full names, credentials, affiliations, contact information and email addresses for all authors.
- During submission, Authors may select between presentation types: **podium or poster**.
- Individuals will be limited to a **maximum of three podium presentations** including all proposed abstracts for **presentations, papers, and sessions**. Podium presentations are not guaranteed.

All abstracts are due by May 5, 2020.

Abstract Content Information

Authors are asked to provide a detailed description of what will be presented. This description should be approximately 100-400 words along with the following sub sections to be identified in the first submitted abstract for it to be considered. Questions the description should answer are listed but each section does not explicitly need to be included in the abstract.

Topic and Target Audience

- Is this a research topic or and industry focused design talk?
- What is the topic (clearly identify scope, methods, and results)?
- Who is the target audience?

Audience Takeaways

- What will the audience take away from your presentation? Try to list 3-5 specific items.
- Explain how the audience will be able to use what they learn?
- Does this provide a practical solution to a problem?

Evaluation for acceptance to the conference will be based on:

- Technical content
- Contribution to science and/or practice of lifeline engineering / community resilience
- Quality of methodology / approach
- Impact/advancement on Lifeline engineering / community resilience
- Practical applications
- Potential for a quality paper and/or presentation in the format you picked
- Consistency with conference theme and goals

Submission Process and Deadlines

Phase One — Abstract Submission

- Session leaders, authors and presenters submit abstracts (see guidelines above) for consideration by **May 5, 2020**.
- The Program Committee will review all abstracts based on the evaluation and acceptance criteria.
- Notice of acceptance or declination will be sent to the authors by **June 2, 2020**.

Phase Two — Draft Paper Submission

- Authors submit draft papers between 6 and 12 pages long for consideration by **August 16, 2020**.
- Draft papers must be formatted using MS Word according to ASCE guidelines. A sample document that may be used as a template is available at **http://bit.ly/2R0IX1p**
- Track Leaders will arrange for a peer review for each draft paper based on the ASCE Guidelines for Peer Reviewers of Proceedings Papers, which is available at **http://bit.ly/2N6Jyxq**
- Then, based on the review results, their own judgement, the evaluation criteria, and following ASCE paper format, Track Leaders will make preliminary decisions about whether or not to accept the draft paper.
- Preliminary decisions about presentation formats (rescindable if the final paper is still not of an acceptable quality) may be made at this time, depending on the preference of the Program Committee.
- Notice of these decisions, along with the review suggestions (presented anonymously), will be sent to the authors by **September 28, 2020**.

Phase Three — Final Paper Submission

- Authors submit final versions of their approved draft papers for consideration by **October 28, 2020**.
- Track Leaders will review the final papers for compliance with review suggestions made during draft phase.
- Based on instructions from the Program Committee, session chairs will accept a specific number of papers for oral podium presentation at the conference. Other papers submitted to the session may be declined, or offered an alternative presentation type, so the conference goals can be optimally achieved. Final decisions about presentation formats will be made at this time. Notice of the final decision will be sent to the authors after all papers are received.

Proceedings and ASCE Copyright Transfer Agreement Requirement

Proceedings will be published online and made available to all conference registrants. The proceedings will be published and copyrighted by ASCE.

IMPORTANT: Submitting authors are required to sign the ASCE Copyright Transfer Agreement during the submission process, stating that 1) all authors listed on the manuscript are aware of their authorship status and qualify to be authors on the manuscript, 2) all content, figures (drawings, charts, photographs, etc.), and tables in the submitted work are either original work created by the authors listed on the manuscript or work for which permission to reuse has been obtained by the authors from the creator, and 3) the author transfers copyright to the ASCE. Further details are available at **http://bit.ly/2DNB8FX**

Notice of Registration Requirement

Every presentation, paper, and session awarded final acceptance into the conference technical program must have at least one person register for the conference by the speaker registration deadline. Each person designated to be part of an accepted session must also register by the speaker registration deadline.

Acceptance into the conference program and publication in the conference proceedings without registering for the conference and presenting is not possible. If you will not be able to attend, please do not submit an abstract. UCLA and ASCE do not reimburse or pay the presenter's costs to attend the conference.

Suggested Conference Topics

Submit your session, paper, or presentation abstract to one of the following tracks:

- **Lifeline Infrastructure Systems|** Water, wastewater, and flood risk management; Gas and liquid fuels; Electric power; Communication; Transportation; Solid waste management/ Debris management; Critical facilities; Dependencies and interdependencies; Lifeline system resilience

- **The 1971 San Fernando Earthquake |** Retrospective on 1971 San Fernando Earthquake; What was learned and how it has impacted current states of practice for: Geo-sciences; Lifeline, Structural, and/or Geotechnical earthquake engineering; Socio-economics; International perspectives resulting from the 1971 earthquake.

- **Hazards |** Earthquake geohazards (ground motions, liquefaction, landslides, fault rupture, and multi-earthquake hazard impacts on lifeline systems); Tsunami; Warnings, alerts, and tools for managing hazards; Multihazards (e.g., combined earthquake and non-earthquake hazards); Cascading hazards (hazmat, spills, etc.); Fire and flood hazards.

- **Post-Event Investigations & Longitudinal Studies |** Performance of lifeline systems and critical facilities during major earthquake and tsunami events since 1971; Response, recovery, and/or reconstruction of lifeline systems.

- **Community Resilience |** Risk and resilience; Social and economic systems; Performance objectives and metrics; Vulnerability; Loss estimation; Building clusters and how lifeline systems support community resilience; Resilience planning programs; Implementation of resilience plans; Continuity planning; Response; Recovery, restoration, rebuild.

- **Emerging & Advanced Technologies |** Resilient memory materials; System instrumentation and monitoring; City-scale simulations; Machine learning and artificial intelligence; Microgrids; UAV, Remote sensing; Early warning systems.

- **Policy & Governance |** Public policy and resilience; Land use planning; Policy and governance for lifeline systems; Guidelines, standards, codes for lifeline system performance.

- **Suggestions for additional technical tracks** are welcome. The proposal shall support a minimum of three 90-minute sessions and be consistent with the conference theme and goals as outlined. Submit technical track proposals to **lifelines2021@samueli.ucla.edu**

Conference Program Committees

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Ertugrul Taciroglu, Ph.D., M.ASCE, Chair, Dept. of Civil and Environmental Engineering, UCLA

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Craig A. Davis, Ph.D., P.E., G.E., M.ASCE, C A Davis Engineering
Kent Yu, Ph.D., P.E., S.E., M.ASCE, SEFT Consulting Group
Ertugrul Taciroglu, Ph.D., M.ASCE, Chair, Dept. of Civil and Environmental Engineering, UCLA

See website www.lifelines2021.ucla.edu for listing of other committee members

ASCE Contact Staff
Catherine Tehan, Aff.M.ASCE

UCLA Contact Staff
Oszie Tarula, Digital Media Director

Exhibiting

Exhibit opportunities will be available. Interested parties, please contact:
emiwa@support.ucla.edu

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