



Center for Risk-Based Community Resilience Planning
A NIST-funded Center of Excellence

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University of Colorado Boulder

Colorado State University Lory Student Center; Room LSC 390

Tuesday October 21, 2025

9:30 – 10:45AM

Join Zoom Meeting

<https://zoom.us/j/92341012061?pwd=2Xm62uXmQBHPL6Ut6UXJwdYB0iY2s5.1>

Meeting ID: 923 4101 2061

Passcode: 047199

TITLE: Engineering Risk, Decision Analysis and Resilience for Communities
Confronting Natural Hazards: A Discussion in Four Parts

ABSTRACT:

The cost of natural disasters continues to rise around the world, in part because of population growth, urbanization and the pressures they place on land use, and in part because policy makers continue to undervalue natural hazard risk in long-term planning. Yet these hazards are critical to community sustainability, and fundamental to the concept of resilience. The shortcoming in reducing the vulnerability of infrastructure lies partly with engineers and risk professionals, who must be aware of public perceptions of risk and political process rationality, which present inherent incompatibilities. Engineers need to know which measures of risk are most meaningful or relevant to decision makers, and then be able to communicate those risks, and the costs and benefits of mitigation, in concise, credible and meaningful terms. This seminar will discuss four related aspects: approximate reliability methods for community-wide resilience, issues of risk perception, practical rationality of elected officials, and a proposed enhancement to the ASCE Infrastructure Report Card.

BIO:



Ross B. Corotis, NAE, is Professor of Engineering Emeritus and Dean Emeritus at the University of Colorado in Boulder. He researches the coordinated roles of engineering and social science in framing and communicating long-term hazard risks and resiliency for the built environment. With three degrees from MIT, he was on the faculty at Northwestern University, established the Department of Civil Engineering at The Johns Hopkins University, and was Dean of Engineering at CU. He chaired committees on structural safety for ASCE and ACI and the Executive Committee of IASSAR, served as science advisor for the Department of State in Washington, DC. and was Editor of the journals Structural Safety and ASCE Journal of Engineering Mechanics. For The National Academies he served on the Building Research Board, the Disasters Roundtable, the Board on Infrastructure and the Constructed Environment, chaired the Laboratory Assessment Board, was founding chair of the Committee on NIST Technical Programs, and Chair of the Civil Engineering Section of the NAE. He is a registered professional engineer and structural engineer, Distinguished Member of ASCE, Fellow of the Structural Engineering and Engineering Mechanics Institutes, recipient of the ASCE Huber, Shinozuka and OPAL Awards, and author of more than 250 publications.