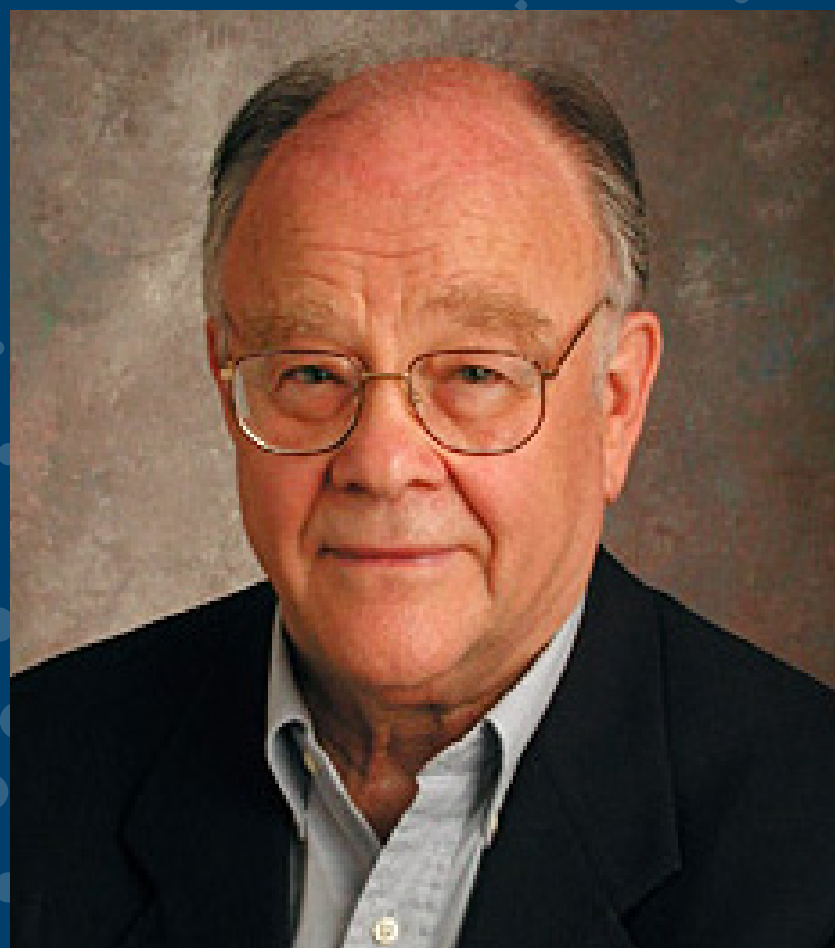




DEPARTMENT OF CIVIL,
CONSTRUCTION, AND
ENVIRONMENTAL
ENGINEERING

Arnold D. Kerr Lecture in Engineering Mechanics and Design



DR. ARNOLD D. KERR

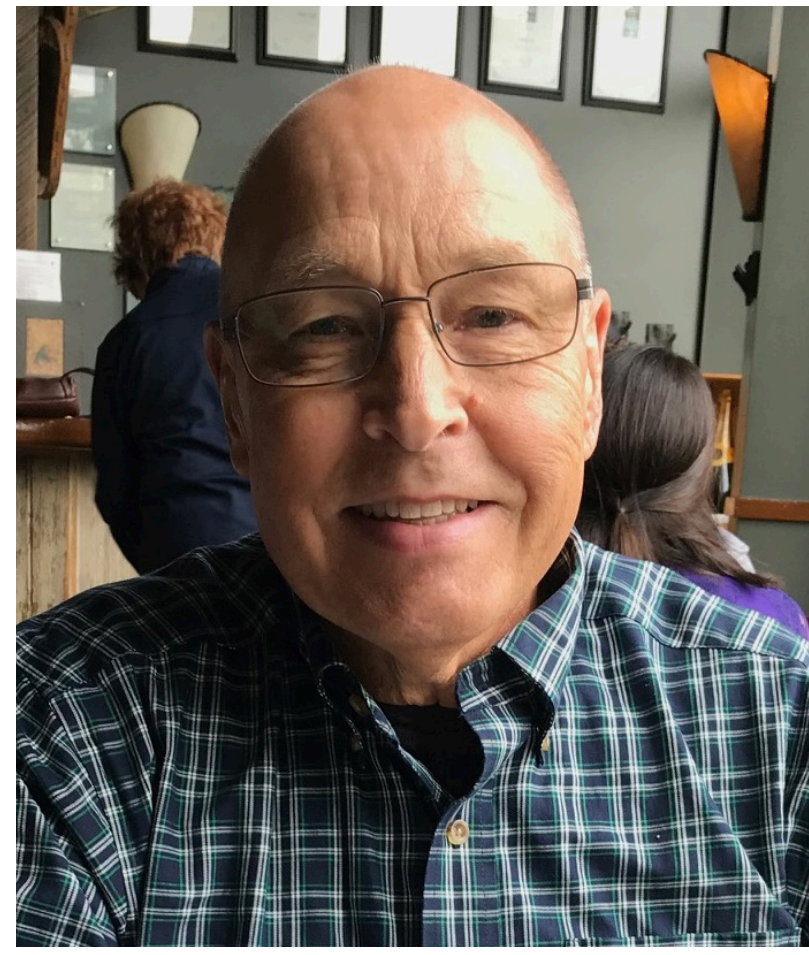
The Kerr Lecture Series honors Dr. Arnold D. Kerr, Professor Emeritus of Civil Engineering at the University of Delaware. The series brings distinguished scientists and engineers to the University of Delaware each year to speak on topics in engineering mechanics and design. An endowment established in Kerr's name upon his retirement in 2004 provides funds for the lectureship.

For more information contact:

Christine Murray
camurray@udel.edu
302-831-2442

ARNOLD D. KERR LECTURE

THE EVOLUTION OF NATURAL HAZARD RISK REDUCTION PRACTICE AND POLICIES SINCE HURRICANE KATRINA



Lewis E. Link, Ph.D.

Senior Research Engineer and Research Professor,
Civil and Environmental Engineering
University of Maryland

SEPTEMBER 23, 2024

4:00 P.M. LECTURE | TRABANT THEATRE
RECEPTION IMMEDIATELY FOLLOWING IN ROOM 209

ABSTRACT

Hurricane Katrina was a “bellwether” event, exposing the soft underbelly of the nation’s state of preparation and readiness for major natural hazard events. This was not the first alarm, other events resulting in significant economic and life losses had preceded Katrina. Perhaps none had the gravitas of the massive disruption of a major city, a city whose vulnerability had been inherently known and protective measures contemplated over decades. The Katrina event also provides a convenient “marker” for examining the evolution of natural hazard policies and practice. The situation prior to Katrina represented an environment dominated by deterministic methods, slow updates to criteria and practice, decision making via legacy benefit/cost criteria, and indecisive investments. The National response to Katrina was one of overwhelming attention and advancement in both policy and practice, embracing advanced probabilistic approaches, hi-fidelity modeling and consideration of risk and reliability. Resources were readily available, and construction of a significantly advanced and robust risk mitigation system resulted. This was accompanied by significant updates in water policy and practice.

Additional events in the U S, including Sandy (New York), Harvey (Houston) and a host of urban flooding events, reinforce the fact that in spite of the advances in New Orleans, many major communities remain highly vulnerable. It is also clear that the knowledge and methods that evolved from New Orleans are no longer adequate to deal with the growing residual risk, aging flood mitigation infrastructure and limited and spotty investments (except for recovery). This lecture examines and contrasts the pre-Katrina and post-Katrina natural hazard policies and practices and assesses their limits with respect to the challenges we face now and in the future.

BIOGRAPHY

Lewis E Link is currently serving as Senior Research Engineer and Research Professor, in the Department of Civil and Environmental Engineering, University of Maryland. He joined the University of Maryland following 34 years of service with the U S Army Corps of Engineers. His final position with the Corps was as the Director of Research and Development and Chief Scientific Advisor for the Agency. Prior to that he served as Director of The U S Army Cold Regions Research and Engineering Laboratory and Deputy Chief of the Corps Coastal Engineering Research Center. While with the University, he served as Director of the Interagency Performance Evaluation Task Force, established as an independent entity to conduct the forensic analysis of New Orleans following Hurricane Katrina and to establish the technical basis for future flood risk reduction measures in South-East Louisiana. He also served on the Netherlands International Advisory Commission, providing oversight to their Delta Model and Delta Program efforts to establish a strategy for addressing long-term flood risk reduction in the Netherlands. Dr Link was a member of the Maryland Coast Smart Council, providing advice to the Governor of Maryland concerning management of the State’s considerable coastal domain and currently serves on the DoD Board on Coastal Engineering Research.

Dr. Link has received numerous awards to include the Engineering News Record Award of Excellence, the Army Engineer Association Gold and Silver DeFleury Medals, the Department of Army Outstanding Civilian Service Award, and four Presidential Awards as a senior executive. He was elected to the National Academy of Construction and serves as a contributing Editor for The Military Engineer, the journal of The Society of American Military Engineers.



UNIVERSITY OF DELAWARE
ENGINEERING