

BIOGRAPHICAL DATA

ROSS B. COROTIS, PE, NAE, Dist.M., ASCE
Denver Business Challenge Professor of Engineering
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EDUCATION

S.B. Civil Engineering (Economics Minor equivalent) Massachusetts Institute of Technology 1967
S.M. Civil Engineering Massachusetts Institute of Technology 1968
Ph.D. Civil Engineering (Structural Mechanics) Massachusetts Institute of Technology 1971

ACADEMIC CAREER

Massachusetts Institute of Technology

Teaching Assistant in Civil Engineering (full-time), 1969-1971

Northwestern University

Assistant Professor of Civil Engineering, 1971-1974

Associate Professor of Civil Engineering, 1975-1979

Professor of Civil Engineering, 1979-1981

The Johns Hopkins University

Professor of Civil Engineering/Materials Science and Engineering, 1981-1982

Willard and Lillian Hackerman Professor of Civil Engineering, 1982-1994

Founding Chair of Civil Engineering, 1983-1990

Associate Dean for Academic Affairs, Engineering, 1990-1992

Associate Dean, Engineering, 1992-1994

The University of Colorado at Boulder

Dean, College of Engineering and Applied Science, 1994-2001

Professor, Department of Civil, Environmental and Architectural Engineering, 1994-

Denver Business Challenge Professor of Engineering, 2001-

PROFESSIONAL REGISTRATION

Registered Professional Engineer: Illinois, Maryland, Colorado

Registered Structural Engineer: Illinois

MEMBERSHIP IN PROFESSIONAL SOCIETIES

American Society of Civil Engineers
International Association for Structural Safety and Reliability
Civil Engineering Risk and Reliability Association
International Association for Bridge Management and Safety

HONORARY SOCIETIES

Sigma Xi
Tau Beta Pi
Chi Epsilon

HONORS AND AWARDS

MIT Civil Engineering Valedictorian, 1967
NSF Graduate Fellowship, 1967-1969
Northwestern University Technological Institute Teaching Award, 1976-1977
Northwestern University Student Government Faculty Honor Roll, 1979, 1980
Northwestern University Civil Engineering Teacher of the Year, 1979
Member of Four-Person National U.S.-U.S.S.R. Engineer Exchange Delegation, 1979
Walter L. Huber Civil Engineering Research Prize, ASCE, 1984
Civil Engineer of the Year, ASCE Maryland Section, 1986
Engineer of the Year, NSPE Baltimore Engineers Week Council, 1989
Outstanding Engineering Educator, ASCE Maryland Section, 1992
Distinguished Engineering Alumnus Award, Special Category, CU-Boulder, 2000
University of Colorado Multicultural Engineering Program, Certificate of Appreciation, 2000
University of Colorado Pre-Collegiate Summer Program, Certificate of Appreciation, 2001
National Academy of Engineering, Elected Member, 2002
University of Colorado Discovery Learning Center, Dedicated in my name, 2002
University of Colorado Dept of Civil Engineering, Distinguished Achievement Award, 2003
International Association for Structural Safety and Reliability, Distinguished Research Prize, 2005
University of Colorado Dept of Civil Engineering, Special Recognition Award, 2005
University of Colorado Dept of Civil Engineering, Service Award, 2006
University of Colorado Dept of Civil Engineering, Favorite Professor Award, 2006, 2007
University of Colorado Boulder Faculty Assembly Excellence in Teaching Award, 2006
Jefferson Science Fellow, U.S. Department of State, 2008-2013
University of Colorado Dept of Civil Engineering, Clarence Eckel Prize, 2010
ASCE Distinguished Member, elected 2011
University of Colorado Dept of Civil Engineering, Teaching Award, 2012
Charter Fellow, Engineering Mechanics Institute of ASCE, elected 2013

CONSULTING

Lambe and Whitman, 1970
Jack E. Leisch and Associates, 1971, 1978
American Concrete Pipe Association, 1971-1976
McNeal, Schick and Archibald, Cleveland, Ohio, 1975
Illinois Institute of Environmental Quality, 1978
National Bureau of Standards, 1979-
Illinois Institute of Technology Research Institute, 1979
Evanston Environmental Association, 1979-1980
FMC Corporation, 1980-1981
O'Doherty, Gallagher and Need, 1983
Paley, Rothman and Cooper, 1986
Prickett, Jones, Elliott, Kristol and Schnee, 1987
American Iron and Steel Institute, 1988
Rogers and Wells, 1990
O'Doherty, May and Burgoyne, 1992
Weris and Associates, 2009-2010

EDUCATIONAL SERVICE

Review of College of Engineering, University of Iowa, April 1999
Presentation, Southwest Regional Conference, Society of College and University Planners,
Tucson, Arizona, October 1999
Presentation, National Conference, Society of College and University Planners,
Denver, Colorado, July 2000
Keynote, Project Kaleidoscope Summer Institute, Leadership in the Reform of Science,
Math, Engineering & Technology, The Reinvention Center of SUNY Stony Brook,
Keystone, Colorado, July 2000
Review of School of Civil & Environmental Engineering, Georgia Institute of Technology, 2016

PROFESSIONAL COMMITTEES AND ACTIVITIES

International

Civil Engineering Risk and Reliability Association
Member, Board of Directors, 1999-2004

International Association for Bridge Maintenance and Safety
Scientific Committee, 2002, 2004, 2006, 2010, 2012 Conferences

International Association for Structural Safety and Reliability
Scientific Committee, 1993 Conference, Innsbruck
Scientific Committee, 1997 Conference, Kyoto

Chair, Scientific Committee, 2001 Conference, Newport Beach
Executive Board: Chair 1998-2001, Member 2002-2006
Advisory Board: Chair, 2004-2006
International Advisory Committee: 2012-2013

International Council for Building Research, Studies, and Documentation
CIB Commission W81 Actions on Structures, 1983- 1996
Triennial Congress Program Committee, 1984-1987

International Federation for Information Processing
Committee on Reliability and Optimization of Structures, 1989-
Organizing Committee, 1991 Conference, Munich
Co-Organizer, 1996 Conference, Boulder

International Forum on Engineering Decision Making
Member, Advisory Council, 2005-2010
Consortium Member, 2010-

International Journal of Structural Safety
Associate Editor, 1989-1991
Editor-in-Chief, 1991-1999
Editorial Board, 1989-
Guest Editor, 2002

International Journal of Risk Assessment and Management
Editorial Board, 2004-
Guest Editor, 2006

International Standards Organization
U.S. Delegate to ISO 2394, 2011-

Probabilistic Engineering Mechanics
Editorial Board, 2004-

Structure and Infrastructure Engineering
Editorial Board, 2004-2008

National

American Concrete Institute
Committee 348, Structural Safety, 1972-1992
Subcommittee A Chair, 1982-1986;
Chair, 1986-1988

American National Standards Institute
Live Loads Committee, 1974-1984 (Chair, 1978-1984)

American Society for Engineering Education
Curtis W. McGraw Research Award Committee, 1998-2000

Engineering Deans Council
Public Policy Committee, 1998-2001
Executive Board, 1998-2001

American Society of Civil Engineers

Minimum Design Loads for Buildings and Other Structures
Standards Committee, 1985-1997
Chair of the Live Loads Subcommittee, 1985-1989

Structural Division/Structural Engineering Institute
Task Committee on Structural Safety, 1973-1974
Committee on the Safety of Buildings, 1975-1988, 1993-96
Chair, 1984-1987
Committee on Practical Reliability Concepts, 1985-1989
Technical Administrative Committee on Structural Safety and Reliability
Chair, 1988-1992
Eighth Annual Structures Congress, Co-Chair, 1990
Administrative Committee on Research, 1991-1992
Comm. on Disaster Resilience of Structures, Infrastructure & Communities, 2012-

Engineering Mechanics Division

Newsletter Editor, 1975-1978
Committee on Probabilistic Methods in Civil Engineering, 1974-1985, 1987-1999
Control Member, 1983-1985, 1987-1989, 2002-
Vice Chair, 1995-1996, 1998-1999
Chair, 1996-1998
Editor, *Journal of Engineering Mechanics*, 2004-2010

Infrastructure Resilience Division

Founding Member, Risk and Resilience Measurements Committee, Performance
Objectives Subcommittee, 2015-

Department Heads Council, Elected member, 1989-1990

Specialty Conference on Probabilistic Mechanics & Structural & Geotechnical Reliability
Chair, Organizing Committee, 1992

Applied Mechanics Reviews, Contributing Reviewer, 1973-1979

Multihazard Mitigation Council of the National Institute of Building Sciences
Affiliate Member, 2002-

National Academy of Engineering

Greatest Engineering Achievements Book Committee, 2000
Planning Meeting on Structural Safety and Reliability, 2002
Symposium Organizer, Midwest Regional Meeting, April 2003
Finance and Budget Committee, 2003-2006

Secretary, Civil Engineering Section, 2003-2006
Nominating Committee, 2004
Vice Chair, Civil Engineering Section, 2007-2009
Chair, Civil Engineering Section, 2009-2011
Symposium Organizer, Midwest Regional Meeting, May 2010

National Research Council (The National Academies)

Board Appointments

Building Research Board, 1985-1988
Laboratory Assessment Board, 2009- (Chair 2017-)
Board on Infrastructure and the Constructed Environment, 2012-
Committee on Assessment of NIST Technical Programs, 1999-2014(Chair, 2009-2014)
Vice Chair, Panel on Building and Fire Research Laboratory, 2002-2003
Chair, Panel on Building and Fire Research Laboratory, 2003-2007
Natural Disasters Roundtable, Steering Committee, 2002-2005
Study Committee on Resilience of Communities behind Dams and Levees, 2011-2012
The International Technology Council, 1984-1987
Intelligence Science and Technology Experts Group (ISTEG)

Chicago

Acoustical Society of America, Chicago Regional Chapter
Executive Committee, 1972-1973 (Secretary, 1973-1974)

American Society of Civil Engineers, Illinois Section
Chair, Structural Division, 1974-1975
Director, 1975-1977
Goals Committee, 1978

Chicago Committee on High Rise Buildings
Lateral Forces Task Force, 1973-1981

Midwest Acoustics Conference
Arrangements Chair, 1972
Executive Committee, 1973-1976

Baltimore

American Concrete Institute, Maryland Chapter
Founding Director, 1983-1985

American Society of Civil Engineers, Maryland Section
Nominating Committee, 1985
Vice President, 1987-1988
President, 1988-1989

Mayor's Task Force on Construction Management, 1985

Colorado

Colorado Department of Economic Development and International Trade, proposal panel, 2014

RESEARCH ACTIVITIES

Soil-Structure Interaction of Buried Concrete Pipe, ACPA, 1971- 1976, \$568,300, (R.A. Parmelee and R.J. Krizek, project Directors), associate investigator

A Multidimensional Stochastic Model for Flood Prediction, NSF, 1973-1974, \$17,000, project director

Stochastic Modelling of Site Wind Characteristics, NSF, 1975- 1976, \$45,700, project director

Stochastic Analysis of Live Floor Loadings in Buildings, NSF, 1974-1977, \$55,200, project director

Stochastic Modelling of Site Wind Characteristics, ERDA, 1976-1977, \$58,668, project director

Develop a Highway Safety and Traffic Study Program, FHWA, 1976-1978, \$129,544, (D.S. Berry and R.C. Pfefer, project directors), associate investigator

Vibrations Induced by Earthquake: Application to Nuclear Reactor Structural Safety Analysis and Design, AEO of Iran, 1976-1979, \$447,700, (S. Nemat-Nasser, project director), associate investigator

Survey Methodology and Reliability Analysis for Site Wind Characteristics, DOE, 1977-1978, \$39,977, project director

Survey Methodology and Reliability Analysis for Site Wind Characteristics, DOE, 1978-1979, \$73,986, project director

Develop a Highway Safety and Traffic Study Program, FHWA, 1978-1979, \$69,900 (J.L. Schofer, project director), associate investigator

Lifetime Reliability Analysis in Structural Systems with Nonlinearities, NSF, 1979-1981, \$88,205, project director

Statistical Analysis of Wind Characteristics at Candidate Wind Turbine Sites, Battelle Pacific Northwest Laboratories, 1981-1982, \$49,958, project director

Statistical Duration-Intensity Model of Structural Floor Loads, NSF, 1982-1984, \$131,331, project director

Stochastic Models of Wind Forces on Buildings and Dynamic Response, NBS, 1982-1984, \$19,788, project director

Reliability-Based Limit State Design of Structural Systems with Stochastic Loads, NSF, 1984-1986, \$179,957, project director

Reliability of Structures Subjected to Earthquake Ground Motion, NBS, 1985, \$8,510, project director

Application of Mathematical Programming Concepts to Structural System Reliability, NSF, 1987-1989, \$165,004, project director

Real Costs of Historical Dam Failures, FEMA, 1987-1989, \$91,784 (J. Boland and B. Ellingwood, project directors), faculty associate

Performance-Optimized Reliability Analysis of Structural Systems, NSF, 1988-1990, \$165,138, project director

Estimation of Extreme Probability Distribution Tails: Application to Extreme Wind Speeds, NSF, 1991-1993, \$109,147, project director

Structural System Reliability and Optimization - Incorporating Nonlinear Mechanics in Mathematical Programming Approaches, NSF, 1991-1994, \$109,560, project director

Prediction of Design Wind Speeds by Extreme Value Estimation Procedures, NSF, 1995-1998, \$176,136, project director

Estimation of Structural Systems Reliability under Hurricane Hazard, NSF (R. Balaji, PI), 2003-2004, \$40,000, co-principal investigator

Comprehensive Risk Analysis for Structure Type Selection, CDOT, 2007-2010, \$80,000, project director

Recovery Process and Progress Following the 2009 L'Aquila Earthquake, (A. Liel, PI), 2009-2010, \$39,970, co-principal investigator

Structural Reliability and Sustainable Resilience, NSF, 2011-2014, \$300,000, project director

Development of Risk-Based Decision Methodology for Facility Design, CDOT, 2012-2014, \$99,246, project director

EAGER: Uncertainty Quantification of Structural Systems: Generalized Information Theory, NSF, 2015-2017, \$155,192, project director

Graduate Assistance in Areas of National Need – Engineering Community Resilience, Department of Education, 2015-2018, \$1,190,186, project director

Other Funding

Hopkins Engineering Research Opportunities, GE Foundation, 1991-1994, \$75,000, project director.

REFEREED JOURNAL PAPERS

"First Passage of Nonstationary Random Processes," (with E.H. Vanmarcke and C.A. Cornell), *Journal of the Engineering Mechanics Division* ASCE, Vol. 98, No. EM2, Proc. Paper 8816, April 1972, pp. 401-414.

"Statistical Analysis of Live Load in Column Design," *Journal of the Structural Division*, ASCE, Vol. 98, No. ST8, August 1972, pp. 1803-1815.

"The Iowa Deflection Formula: An Appraisal," (with R.A. Parmelee), *Highway Research Record*, 413, 1972, pp. 89-101.

"Statistical Analysis of Continuous Data Records," *Transportation Engineering Journal*, ASCE, Vol. 100, No. TE1, February 1974, pp. 195-206.

"Nonlinear Stress-Strain Formulation for Soils," (with M.H. Farzin and R.J. Krizek), *Journal of the Geotechnical Engineering Division*, ASCE, Vol. 100, No. GT9, September 1974, pp. 993-1008.

"Field Performance of Reinforced Concrete Pipe," (with R.J. Krizek and M.H. Farzin), *Transportation Research Record*, 517, 1974, pp. 30-47.

"Analytical and Experimental Evaluation of Modulus of Soil Reactions," (with R.A. Parmelee), *Transportation Research Record*, 518, 1974, pp. 29-38.

"Teaching Through Analogy: Moment Theory in Statics and Statistics," (with G.L. Peterson and M. Wachs), *Mechanical Engineering News*, ASEE, Vol. 11, No. 3, August 1974, pp. 24-29.

"Inverse Method for Determining Approximate Stress-Strain Behavior of Soils," with M.H. Farzin and R.J. Krizek), *ASTM Journal of Testing and Evaluation*, JTEVA, Vol. 3, No. 1, January 1975, pp. 51-61.

"Time-Dependent Spectral Content of System Response," (with E.H. Vanmarcke), *Journal of the Engineering Mechanics Division*, ASCE, Vol. 101, No. EM5, October 1975, pp. 623-638.

"Response of Structures to Random Wind Forces," (with M.J. O'Rourke and R.A. Parmelee), *Journal of the Structural Division*, ASCE, Vol. 101, No. ST12, December 1975, pp. 2557-2572.

"Statistical Analysis of Constrained Soil Modulus," (with J.H. Salazar Espinosa and R.J. Krizek), *Transportation Research Record* 537, 1975, pp. 59-68.

"Evaluation of Modulus and Poisson's Ratio from Triaxial Test," (with M.H. Farzin and R.J. Krizek), *Transportation Research Record* 537, 1975, pp. 69-80.

"Probabilistic Approach to Prediction of Consolidation Settlement, (with H.H. El-Moursi and R.J. Krizek), *Transportation Research Record* 548, 1975, pp. 47-61.

- "Regression Analysis of Soil Compressibility," (with A.S. Azzouz and R.J. Krizek), *Soils and Foundations*, Vol. 16, No. 2, June 1976, pp. 19-30.
- "Stochastic Considerations in Thunderstorm Modeling," *Journal of the Hydraulics Division*, ASCE, Vol. 102, No. HY7, July 1976, pp. 865-879.
- "Probabilistic Analysis of Predicted and Measured Settlements," (with R.J. Krizek and H.H. El-Moursi), *Canadian Geotechnical Journal*, Vol. XIV, No. 1, February 1977, pp. 17-33.
- "Probability Models for Live Load Survey Results," (with V.A. Doshi), *Journal of the Structural Division*, ASCE, Vol. 103, No. ST6, June 1977, pp. 1257-1274.
- "Analysis and Measurement of Soil Behavior around Buried Concrete Pipe," (with R.J. Krizek), *ASTM Special Technical Publication 630*, M. Bealey and J.D. Lemons, Editors, 1977, pp. 91-104.
- "Oscillator Response to Modulated Random Excitation," (with T.A. Marshall), *Journal of the Engineering Mechanics Division*, ASCE, Vol. 103, No. EM 4, August 1977, pp. 501-513.
- "Uncertainty Analysis of Settlement Rate," (with H.H. El-Moursi and R.J. Krizek), *Transportation Research Record* 616, 1977, pp. 81-84.
- "Variance Analysis of Wind Characteristics for Energy Conversion," (with A.B. Sigl and M.P. Cohen), *Journal of Applied Meteorology*, Vol. 16, No. 11, November 1977, pp. 1149-1157.
- "Soil Stresses and Displacements in a Concrete Pipe Trench Installation," (with T.H. Wenzel and R.J. Krizek), *Transportation Research Record*, 640, pp. 52-58.
- "Probability Models of Wind Velocity Magnitude and Persistence," (with A.B. Sigl and J. Klein), *Journal of Solar Energy*, Vol. 20, No. 6, 1978, pp. 483-494.
- "Estimate of Soil Compressibility from Standard Penetration Test," (with H.H. El-Moursi and R.J. Krizek), *Geotechnical Engineering*, Vol. 9, 1978, pp. 1-12.
- "Inventory Load Survey of a Hospital," (with J.C. Harris), *Journal of the Structural Division*, ASCE, Vol. 104, No. ST12, December 1978, pp. 1859-1868.
- "Run Duration Analysis of Surface Wind Speeds for Wind Energy Application," (with A.B. Sigl and D.J. Won), *Journal of Applied Meteorology*, Vol. 18, No. 2, February 1979, pp. 156-166.
- "The Stochastic Nature of Building Live Loads," (with V. Jaria), *Journal of the Structural Division*, ASCE, Vol. 105, No. ST3, March 1979, pp. 493-510.
- "A Model for the Sum of Independent Gamma Live Loads," (with V. Jaria), *Journal of the Structural Division*, ASCE, Vol. 105, No. ST8, August 1979, pp. 1701-1705.

"Confidence Interval Procedures for Wind Turbine Candidate Sites," *Journal of Solar Energy*, Vol. 24, No. 5, 1980, pp. 427-434.

"A Probability Model for Design Live Loads," (with P. Chalk), *Journal of the Structural Division*, ASCE, Vol. 106, No. ST10, October 1980, pp. 2017-2033.

"Area-Dependent Processes for Structural Live Loads," (with M. Harris and C. Bova), *Journal of the Structural Division*, ASCE, Vol. 107, No. ST5, May 1981, pp. 857-872.

"Simulation of Hourly Wind Speed and Array Wind Power," (with K. Chou), *Journal of Solar Energy*, Vol. 26, No. 3, 1981, pp. 199-212.

"Delphi Methods: Theory and Design Load Application," (with R. Fox and J. Harris), *Journal of the Structural Division*, ASCE, Vol. 107, No. ST6, June 1981, pp. 1095-1105.

"A Comparative Seismic Hazard Study for Azerbaijan Province in Iran," (with B. Rowshandel and S. Nemat-Nasser), *Bulletin of the Seismological Society of America*, Vol. 71, No. 1, February, 1981 pp. 335-362.

"Bayesian Persistence Analysis for Wind Energy," (with H. Rao), *Journal of the Energy Division*, ASCE, Vol. 108, No. EY2, June 1982, pp. 116-127.

"Mean of Autocorrelated Air Quality Measurements," (with C. Hirtzel and J. Quon), *Journal of the Environmental Division*, Vol. 108, No. EE3, June, 1982, pp. 488-501.

"Observations on Structural System Reliability and the Role of Modal Correlations" (with K. Chou and C. McIntosh), *Structural Safety*, 1983, Vol. 1, No. 2, pp. 189-198.

"Estimating the Maximum Value of Autocorrelated Air Quality Measurements," (with C. Hirtzel and J. Quon), *Atmospheric Environment*, Vol. 16, No. 11, 1982, pp. 2603-2608.

"Bayesian Analysis of Regional Wind Energy Potential," (with H. Rao), *Journal of the Engineering Mechanics Division*, ASCE, Vol. 108, No. EM6, December 1982, pp. 1198-1214.

"Generalized Wind Speed Probability Distribution," (with K. Chou), *Journal of the Engineering Mechanics Division*, ASCE, Vol. 109, No. 1, February 1983, pp. 859-874.

"Probabilistic Load Duration Model for Live Loads," (with W. Tsay), *Journal of Structural Engineering*, ASCE, Vol. 109, No. 4, April 1983, pp. 859-874.

"Reliability of Nonlinear Framed Structures," (with T.Y. Kam and E.C. Rossow), *Journal of Structural Engineering*, ASCE, Vol. 109, No. 7, July 1983, pp. 1585-1601.

"Inelastic Tangential Stiffness for 2-D Frames," (with T.Y. Kam and E.C. Rossow), *Journal of Structural Engineering*, ASCE, Vol. 109, No. 11, November 1983, pp. 2685-2697.

"Conditioned Gaussian Probability Density," (with K. Chou), *Journal of Engineering Mechanics*, ASCE, Vol. 110, No. 1, January 1984, pp. 115-119.

"Nonlinear Response to Sustained Load Processes," (with K. Chou and A. Karr), *Journal of Structural Engineering*, ASCE, Vol. 111, No. 1, January 1985, pp. 142-157.

"Reliability of Ductile Systems with Random Strengths," (with T. Lin), *Journal of Structural Engineering*, ASCE, Vol. 111, No. 5, June 1985.

"Probability-Based Design Codes," *Concrete International*, Vol. 7, No. 4, April 1985, pp. 42-49.

"Stochastic Analysis of Wind Stream and Turbine Power," (with J-J. Lou), *Journal of Solar Energy*, Vol. 35, No. 4, 1985, pp. 297-309.

"Wood Damage Accumulation by Stochastic Load Models," (with D. Sheehan), *Journal of Structural Engineering*, ASCE, Vol. 112, No. 11, November 1986, pp. 2404-2415.

"Failure Mode Identification for Structural Frames," (with A. Nafday and J. Cohon), *Journal of Structural Engineering*, ASCE, Vol. 113, No. 7, July 1987, pp. 1415-1432.

"Reliability of Random Structural Systems and Load Space Reduction," (with M. Soltani), *Journal of Structural Engineering*, ASCE, Vol. 113, No. 10, October 1987, pp. 2145-2159.

"Near Optimality Analysis for Linear Models," (with A. Nafday and J. Cohon), *Journal of Computing in Civil Engineering*, ASCE, Vol. 2, No. 1, January 1988, pp. 91-95.

"Reliability Based Code Formulations for Reinforced Concrete Buildings," (with M. Israel and B. Ellingwood) *Journal of Structural Engineering*, ASCE, Vol. 113, No. 10, October 1987, pp. 2235-2252.

"Multiparametric Limit Analysis of Frames; Part I-Model and Part II-Computations," (with A. Nafday and J. Cohon), *Journal of Engineering Mechanics*, ASCE, Vol. 114, No. 3, March 1988, pp. 377-403.

"Failure Cost Design of Structural Systems," (with M. Soltani), *Structural Safety*, 1988, Vol. 5, No. 4, pp. 239-252.

"Structural System Reliability using Linear Programming and Simulation," (with A. Nafday), *Journal of Structural Engineering*, ASCE, Vol. 115, No. 10, October 1989, pp. 2435-2447.

"Future of Civil Engineering Profession and Role of Education," (with R. Scanlan), *Journal of Professional Issues*, ASCE, Vol. 115, No. 2, April 1989, pp. 117-124.

"Transfer Function Models for Determining Dynamic Wind Loads on Buildings," (with M. Islam and B. Ellingwood), *Journal of Wind Engineering and Industrial Aerodynamics*, 1990, Vol. 36, pp. 449-458.

"Application of Mathematical Programming to System Reliability," (with A. Nafday), *Structural Safety*, 1990, Vol. 7, Nos. 2-4, pp. 149-154.

"Transfer Function Modeling of Dynamic Wind Loads on Buildings," (with M. Islam and B. Ellingwood), *Journal of Engineering Mechanics*, ASCE, Vol. 116, No. 7, July 1990, pp. 1473-1488.

"Limit State Sensitivity of Structural Frames Subjected to Cyclic Forces," (with T. Wang and B. Ellingwood), *Journal of Structural Engineering*, ASCE, Vol. 116, No. 10, October 1990, pp. 2824-2841.

"Dynamic Response of Tall Buildings to Stochastic Wind Load," (with M. Islam and B. Ellingwood), *Journal of Structural Engineering*, ASCE, Vol. 116, No. 11, November 1990, pp. 2982-3002.

"Load Combinations for Buildings Exposed to Fires," (with B. Ellingwood), *Engineering Journal*, AISC, Vol. 28, No. 1, 1991, pp. 37-44.

"Stochastic Programs for Identifying Critical Structural Collapse Mechanisms," (With J.H. Ellis and J. Zimmerman), *Applied Mathematical Modelling*, Vol. 15, No. 7, July 1991, pp. 367-373.

"Critical Base Excitations of Structural Systems," (with M. Srinivasan and B. Ellingwood), *Journal of Engineering Mechanics*, ASCE, Vol. 117, No. 6, June 1991, pp. 1403-1422.

"Wind-Induced Response of Structurally Asymmetric High-Rise Buildings," (with M. Islam and B. Ellingwood), *Journal of Structural Engineering*, ASCE, Vol. 118, No. 1, January 1992, pp. 207-222.

"Generation of Critical Stochastic Earthquakes," (with M. Srinivasan and B. Ellingwood), *Earthquake Engineering and Structural Dynamics*, Vol. 21, No. 4, 1992, pp. 275-288.

"Collapse Mechanism Identification Using a System-Based Objective," (with J. Zimmerman and J.H. Ellis), *Structural Safety*, Vol. 11, No. 3, 1992, pp. 157-171.

"Structural System Reliability Considerations with Frame Instability," (with J. Zimmerman and J.H. Ellis), *Engineering Structures*, Vol. 14, No. 6, 1992, pp. 371-378.

"Stochastic Optimization Models for Structural Reliability Analysis," (with J. Zimmerman and J.H. Ellis), *Journal of Structural Engineering*, ASCE, Vol. 119, No. 1, January 1993, pp. 223-239.

"Optimization of Structural Frames with Elastic and Plastic Constraints," (with B. Akbora and J.H. Ellis), *Civil Engineering Systems*, Vol. 10, No. 2, 1993, pp. 147-169.

"Assessing the Cost of Dam Failure," (with B. Ellingwood, J. Boland, and N.P. Jones), *Journal of Water Resources Planning and Management*, ASCE, Vol. 119, No. 1, January/February 1993, pp. 64-82.

"Reliability Analysis of Rigid-Plastic Structures by the Static Approach," (with W. Wang and M.R. Ramirez), *Structural Safety*, Vol. 15, No 3, 1994, pp. 209-235.

"Reliability-Based Bridge Design and Life-Cycle Management with Markov Decision Processes," (with S. Tao and J.H. Ellis), *Structural Safety*, Vol. 16, No. 1+2, 1994, pp. 111-132.

"Limit States of Load Path-Dependent Structures in Basic Variable Space," (with W. Wang and M.R. Ramirez), *Journal of Engineering Mechanics*, ASCE, Vol. 121, No. 2, February 1995, pp. 299-308.

"Inspection, Maintenance, and Repair with Partial Observability," (with J.H. Ellis and M. Jiang), *Journal of Infrastructure Systems*, ASCE, Vol. 1, No. 2, June 1995, pp. 92-99.

"Reliability-Based Structural Design with Markov Decision Processes," (with Z. Tao, and J.H. Ellis), *Journal of Structural Engineering*, ASCE, Vol. 121, No. 6, June 1995, pp. 971-980.

"Direct Integration Method for Stochastic Finite Element Analysis of Nonlinear Dynamic Response," (with S.W. Zhang, B.R. Ellingwood and J. Zhang), *Structural Engineering and Mechanics*, Vol. 3, No. 3, 1995, pp. 273-287.

"Dominant Failure Modes for Structures with Stochastic Load Processes," (with W. Wang and M.R. Ramirez), *Journal of Engineering Mechanics*, ASCE, Vol. 121, No. 11, November 1995, pp. 1252-1260.

"Reanalysis of Rigid Frame Structures by the Virtual Distortion Method," (with P. Makode and M.R. Ramirez), *Structural Optimization*, Vol. 11, No. 2, April 1996, pp. 71-79.

"Nonlinear Analysis of Frame Structures by Pseudo Distortions," (with P. Makode and M. Ramirez), *Journal of Structural Engineering*, ASCE, Vol. 125, No. 10, November 1999, pp. 1309--1317.

"Geometric Nonlinear Analysis of Frame Structures by Pseudo Distortions," (with P. Makode and M. Ramirez), *Journal of Structural Engineering*, ASCE, Vol. 125, No. 10, November 1999, pp. 1318-1327.

"Optimal Life-Cycle Costing with Partial Observability," (with M. Jiang and J.H. Ellis), *Journal of Infrastructure Systems*, ASCE, Vol. 6, No. 2, June 2000, pp. 56-66.

"Design Wind Speed Prediction," (with A. Dougherty and A. Segurson), *Journal of Structural Engineering*, ASCE, Vol. 129, No. 9, September 2003, pp. 1268-1274.

"Reliable Design Loads for Natural Phenomena: Illustration with Wind Speeds," (with A. Dougherty), *Natural Hazards Review*, ASCE, Vol. 5, No. 1, February, 2004, pp. 40-47.

"Simplified Stochastic Modeling and Simulation of Unidirectional Fiber Reinforced Composites," (with G. Camata and E. Spacone), *Journal of Probabilistic Engineering Mechanics*, Vol. 19, Nos. 1-2, January, 2004, pp. 33-40.

"An Educational Experiment to Address Infrastructure Needs," (with D.M. Frangopol, J. Diekmann, K. Molenaar and G. Hearn), *International Journal of Critical Infrastructures*, Vol. 1, #2, 2005, pp. 269-280.

“Modeling of Risk-Based Inspection, Maintenance and Life-Cycle Cost with Partially Observable Markov Decision Processes,” (with J. Ellis and M. Jiang), *International Journal of Structure and Infrastructure Engineering*, Vol. 1, No. 1, March, 2005, pp. 75-84.

“Adding Social Discount Rate to the Life-Cycle Cost Decision-Making Algorithm,” (with D. Gransberg), *Journal of Reliability of Structures and Materials*, 2(1), 2006, pp. 13-24.

“An Overview, History and Context for the Consideration of Risk in the Built Environment,” *International Journal of Risk Assessment and Management*, Vol. 7, No. 6/7, 2007, pp. 759-772.

“Gender Dimensions of Building Code Disparities in Natural Disasters: A United States Perspective,” (with E. Enarson) *Australian Journal of Civil Engineering*, Vol 4, No. 1, 2007, pp. 15-26.

“Alternative Valuation of Highway User Delay Costs,” (with A. Trzcinski), *Civil Engineering and Environmental Systems*, Volume 24, Number 2, 2007, pp. 87-97.

“Highway User Travel Time Evaluation,” *Journal of Transportation Engineering*, ASCE, Vol. 133, No. 12, December, 2007, pp. 663-669.

“Societal Issues in Adopting Life-Cycle Concepts within the Political System,” *International Journal of Structure and Infrastructure Engineering*, 5(1), 2009, 59-65.

“Extreme Value Index and Tail Probability Estimates for Mixed Distributions,” (with A. Dougherty and W. Xu), *Probabilistic Engineering Mechanics*, 23(4), 2008, 385-392.

“Risk Communication with Generalized Uncertainty and Linguistics,” *International Journal of Structural Safety*, 31(2), 2009, 113-117.

“Political Issues for Sustainable Hazards Policy,” *International Journal of Engineering under Uncertainty: Hazards, Assessment and Mitigation*, 2(1), January-June 2010, 1-7.

“Multi-Attribute Aspects for Risk Assessment of Natural Hazards,” (with E. Hammel), *International Journal of Risk Assessment and Management*, 14(6), December 2010, 437-458.

“The Variability of Deformation Demand with Ground Motion Intensity,” (with Cristina Cantagallo, Guido Camata and Enrico Spacone), *Probabilistic Engineering Mechanics*, 28, April, 2012, 59-65.

“Including User Cost and Risk Analysis during Construction in Highway Bridge Structure Selection,” (with K.P. Lynch, B. Beams and D. Hattan), *Journal of Transportation Safety & Security*, Vol. 4, Issue 3, 2012, 211-224.

“The Regional Consequences of Individual Natural Hazard Events,” (with Jenni M. Jones), *International Journal of Risk Assessment and Management*, Vol. 16, No. 1/2/3, 2012, 78-111.

“Overcoming Public and Political Challenges for Natural Hazard Risk Investment Decisions.” (with Holly Bonstrom and Keith Porter), *Journal of Integrated Disaster Risk Management*, 2012, 2(1), 1-23.

“A Retrospective Approach to Assessing the Sustainability of the Grand Canal of China,” (with N. Tsung, P. Chinowsky and B. Amadei), *Structures and Infrastructure Engineering*, Vol. 9, Issue 4, 2013, 297-316.

“Strategies of Investment in the Management of Urban Bridges: A Life-cycle approach illustrated for Paris,” (with G. Vacheyroux), *Structures and Infrastructure Engineering*, 2013, 9(11), 1080-1093.

“Perceptions of Decision-Making Roles and Priorities Affecting Rebuilding After Disaster: the Example of L’Aquila, Italy,” (with A. Liel, J. Sutton, G. Camata, E. Spacone and R. Holtzman), *Earthquake Spectra*, Vol. 29, No.3, August, 2013, 843-868.

“Seismic Risk and Society Development Indicators: Examination of Three Countries,” (with Lan Nguyen), *Natural Hazards Review*, ASCE, Vol. 14, Number 2, May, 2013, 122-133.

“An Overview Approach to Seismic Awareness for a “Quiescent” Region,” (with Alena Rein), *Natural hazards*, Springer, 67(2), June, 2013, 335-363.

“Perception of Risk of Natural Hazards: A Hazard Mitigation Plan Framework,” (with Maura Hurley), *International Journal of Risk Assessment and Management*, Vol. 17, No. 3, 2014, 188-211.

“Optimizing Portfolio Loss Reduction using a First-Order Reliability Method Sensitivity Analysis,” (with Holly Bonstrom), *Structure and Infrastructure Engineering*, 2015, 11(9), 1190-1198.

“Building Portfolio Seismic Loss Assessment using the First-Order Reliability Method,” (with Holly Bonstrom), *Structural Safety*, 2015, 52, 113-120.

“A Framework Methodology for Risk-Based Decision Making: Applications to Transportation Agencies,” (with Yolanda Lin and Abbie Liel), *ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems Part A Civil Engineering*, September, 2015, 1(3), 04015006-1 - 04015006-13

“An Overview of Uncertainty Concepts Related to Mechanical and Civil Engineering,” *ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part B Mechanical Engineering*, December, 2015, 1(4), 040801-1 - 040801-12.

“Application of Fuzzy Pattern Recognition of Seismic Damage to Concrete Structures,” (with Emily Elwood), *ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part A Civil Engineering*, December 2015, 1(4), 04015011-1 - 04015011-12.

“First-Order Reliability Approach to Quantify and Improve Building Portfolio Resilience,” (with Holly Bonstrom), *ASCE Journal of Structural Engineering*, 2016, 142(8), C4014001.

“Multi-Hazard Mapping of the United States,” (with Daniel Hahn and Emmanuelle Viaud), *ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part A Civil Engineering*, 2016, DOI: 10.1061/AJRUA6.0000897.

CONFERENCE PROCEEDINGS, PUBLISHED DISCUSSIONS, REPORTS, BOOK CHAPTERS

Solutions Manual to Accompany Probability, Statistics and Decision for Civil Engineers, by J.R. Benjamin and C.A. Cornell (with R. Hauser), 1970.

Discussion of "Statistical Model for Live Floor Loads," by A.M. Hasofer, (with C.A. Cornell), *Journal of the Structural Division*, ASCE, Vol. 95, No. ST7, July 1969, pp. 1576-1581.

"Time-Dependent Power Spectra and First Passage Probabilities," MIT Dept. of Civil Engineering Report R70-78, December 1970, 231p.

Discussion of "Random Processes for Earthquake Simulation," by R. Levy, F. Kozin, and R. Moorman, *Journal of the Engineering Mechanics Division*, ASCE, Vol. 97, No EM5, October 1971, pp. 1591-1594.

"Live Load Reduction: A Reliability Model," *Safety and Reliability of Metal Structures*, Proceedings of the Specialty Conference, ASCE, November 1972, Pittsburgh, pp. 55-82.

"Probabilistic Approach to Heave of Soft Clay around Sheetpile Walls," (with R.J. Krizek), Proceedings of the Eighth International Conference on Soil Mechanics and Foundation Engineering, Moscow, 1973, Vol. 1, Part 3, pp. 143-150.

"A Stochastic Rainfall Model and Statistical Analysis of Hydrologic Factors," Final Report, NSF Grant GK-37442, December 1974, 178p.

Discussion of "Nonstationary Response of Structural Systems," by R.E. Holman and G.C. Hart, *Journal of the Engineering Mechanics Division*, ASCE, Vol. 100, No. EM6, December 1974, pp. 1272-1273.

"Synthesis of Soil Moduli Determined from Different Types of Laboratory and Field Tests," (with R.J. Krizek), In Situ Measurement of Soil Properties, ASCE Specialty Conference, June 1975, Raleigh, pp. 225-240.

"Stochastic Simulation of Thunderstorms," American Geophysical Union, National Symposium on Precipitation Modeling, June 1975, Davis, California, pp. 259-268.

"Stochastic Modelling of Site Wind Characteristics," 1975 Wind Energy Conversion Systems Workshop, June, Washington, D.C., pp. 341-343.

"Building Floor Load Surveys and Stochastic Analysis," 2nd International Conference on Applications of Statistics and Probability in Soil and Structural Engineering, September 1975, Aachen, Germany, pp. 251-264.

"Statistical Evaluation of Soil Index Properties and Constrained Modulus," (with A.S. Azzouz and R.J. Krizek), 2nd International Conference on Applications of Statistics and Probability in soil and Structural Engineering, September 1975, Aachen, Germany pp. 273-294.

Discussion of "Modulus of Soil Reaction Values for Buried Flexible Pipe," by A.K. Howard, (with R.A. Parmelee), *Journal of the Geotechnical Engineering Division*, ASCE, Vol. 103, No. GT9, September 1977, pp. 1034-1036.

"Stochastic Modelling of Site Wind Characteristics," Final Report NSF Grant AER75-00357, November 1976, 298p.

"Stochastic Analysis of Floor Loads," (with V.A. Doshi), National Structural Engineering Conference, ASCE, August 1976, Madison, pp. 72-94.

"Soil-Structure Interaction of Concrete Pipe Systems," (with R.J. Krizek and T.H. Wenzel), National Structural Engineering Conference, ASCE, August 1976, Madison, pp. 607-643.

"Stochastic Modelling of Site Wind Characteristics," Final Report ERDA Contract EY-76-S-06-2342, September 1977, 143p.

"Probability Models of Wind Velocity and Wind Power," Engineering Mechanics Division Specialty Conference, ASCE, May 1977, Raleigh, pp. 55-58.

"Stochastic Considerations in Site Survey Design," Third Biennial Conference and Workshop on Wind Energy Conversion Systems, DOE, September 1977, Washington, D.C., pp. 361-370.

"Statistical Analysis of Wind Power Siting Requirements," 1978 Annual Meeting, American Section of the International Solar Energy Society, August, Denver, pp. 741-745.

"Design of Timber Structures for Natural Hazards," SWST-WFPL-NSF Conference on Structural Use of Wood in Adverse Environments, May 1978, Vancouver, pp. 27.1-27.53.

"Statistical Models for Wind Characteristics at Potential Wind Energy Conversion Sites," Final Report DOE Contract EY-76-S-06-2342, January 1979, 78p.

"Reliability Basis of Live Loads in Standards-State of the Art," ASCE Specialty Conference on Probabilistic Mechanics and Structural Reliability, January 1979, Tucson, pp. 86-90.

"Stochastic Considerations for Office Floor Loads," (with V. Jaria), ASCE Specialty Conference on Probabilistic Mechanics and Structural Reliability, January 1979, Tucson, pp. 65-69.

"Simulation of Correlated Wind Speeds for Sites and Arrays," International Congress, International Solar Energy Society, May 1979, Atlanta.

"Statistical Reliability of Wind Power Assessments," Wind Characteristics and Wind Energy Siting Conference, June 1979, Portland, Oregon.

"A Probabilistic Basis for Area-Dependent Design Live Loads" (with M.E. Harris), Engineering Mechanics Division Specialty Conference, ASCE, September 1979, Austin, pp. 509-512.

"Application of Statistical Techniques to Wind Characteristics at Potential Wind Energy Conversion Sites," Final Report DOE Contract DE-AS06-76ET20283, May 1980, 155p.

Discussion of "Techniques for Spatial Extrapolation of Wind Data," by L.D. Meeker and P.J. Ossenbruggen, *Journal of the Engineering Mechanics Division*, ASCE, Vol. 106, No. EM6, December 1980.

"Section 2.1, Loads," in *ASCE Manual on Evaluation, Maintenance and Repair of Existing Timber Construction*, 1981.

"The Application of Statistical Techniques and Approximate Probabilistic Models to Site Wind Characteristics," ASCE - AWEA Wind Energy Technology Conference, March 1981, Kansas City.

"Statistical Analysis of High-Frequency Wind Speed Characteristics and Wind Turbine Power," Final Report PNL Contract B-B6648-A-N-1, June 1982, 50p.

"Simulation of Wind Speed Time Series for Wind Energy Conversion Analysis," Final Report PNL Contract B-B6648-A-N-1, June 1982, 78p.

"Load Duration Statistics for a Stochastic Live Load Process and Application to a Wood Damage Accumulation Model," Fourth International Conference on Applications of Statistics and Probability in Soil and Structural Engineering, June 1983, Florence, Italy, pp. 225-236.

"Assessing the Representativeness of Wind Data for Wind Turbine Site Evaluation," (with D.S. Renne), NASA-DOE Workshop on Wind Characteristics, July 1981, Cleveland.

"Live Loads: A Stochastic Process Approach," *Advances in Tall Buildings*, Edited by the Council on Tall Buildings and Urban Habitat, Hutchinson Ross Publishing Co., 1984.

"Limit State Reliabilities of Structural Systems" (with T.S. Lin), ASCE Specialty Conference on Probabilistic Mechanics and Structural Reliability, January 1984, Berkeley, pp. 53-56.

"Nonlinear Response to Stochastic Load Processes" (with K.C. Chou), ASCE Specialty Conference on Probabilistic Mechanics and Structural Reliability, January 1984, Berkeley, pp. 389-392.

"Some Statistical Aspects of Wind and Snow Loading," (with B.R. Ellingwood), Engineering Mechanics Division Specialty Conference, ASCE, August 1984, Laramie, pp. 1200-1203.

"Structural System Reliability: Limit States and Modal Consequences," (with M. Soltani), Fourth International Conference on Structural Safety and Reliability, May 1985, Kobe, Japan, pp. I107-I116.

"Load Space Reduction of Random Structural Systems and Failure Cost Design," (with M. Soltani), ICASP 5, May 1987, Vancouver, Canada, pp. 111-118.

"System Reliability of Rigid Plastic Frames," (with A. Nafday), ICASP 5, May 1987, Vancouver, Canada, pp. 119-126.

"Failure Mode Enumeration for System Reliability Assessment by Optimization Algorithm," (with A. Nafday), Reliability and Optimization of Structural Systems, Springer Verlag, New York, 1987, pp. 297-306.

"Serviceability Limit States in Load Space," (with M. Soltani), ASCE Structures Congress, August 1987, Orlando.

"A Kinematic Approach to Simulation-Based System Reliability Evaluation," (with A. Nafday), ASCE Joint Specialty Conference on Probabilistic Methods, May 1988, Blacksburg.

"Structural System Reliability with LP Models," (with A. Nafday), 2nd Conference on Reliability and Optimization of Structural Systems, IFIP, September 1988, London, pp. 225-234.

"Transfer Function Models for Determining Dynamic Wind Loads on Buildings," (with M.S. Islam and B. Ellingwood), 6th U.S. Conference on Wind Engineering, March 1989, Houston.

"Codified Reliability for Structures during Construction," (with A. Scanlon), ASCE Structures Congress, May 1989, San Francisco.

"Mitigation of Wind-Induced Vibration of Tall Buildings," (with M.S. Islam and B. Ellingwood), ASCE Structures Congress, May 1989, San Francisco.

"Analysis of Structural System Reliability with Chance Constrained Programming," (with J.H. Ellis and J.J. Zimmerman), First International Conference on Computer Aided Optimum Design of Structures, OPTI89, June 1989, Southampton, UK, pp. 253-263.

"Wind-Induced Response of Torsionally Coupled Buildings," (with M.S. Islam and B. Ellingwood), 5th International Conference on Structural Safety and Reliability, ICOSSAR 89, August 1989, San Francisco, pp. 63-70.

"Reliability Basis for Codes for Design of Reinforced Concrete Structures," (with B. Ellingwood and A. Scanlon), 5th International Conference on Structural Safety and Reliability, ICOSSAR 89, August 1989, San Francisco, pp. 2035-2042.

"Load Path Dependence of Structural Systems," (with T.Y. Wang and B. Ellingwood), 5th International Conference on Structural Safety and Reliability, ICOSSAR 89, August 1989, San Francisco, pp. 943-950.

"Stochastic Programs for Identifying Significant Collapse Modes in Structural Systems," (with J. Zimmerman and J. Ellis), IFIP, March 1990, Berkeley, pp. 359-367.

"Axial Force-Moment Interaction in System Reliability," (with J. Zimmerman and J. Ellis), ASCE Engineering Mechanics Specialty Conference, May 1991, Columbus.

"Failure Cost Assessment for Dam Failure Risk Analysis," (with B. Ellingwood, J. Boland and N. Jones), ICASP 6, June 1991, Mexico City, pp. 1009-1016.

"Stochastic Programs for Reliability of Systems with M-P Interactions," (with J. Zimmerman and J. Ellis), IFIP, September 1991, Munich.

Discussion of "Ph.D. Roadblocks for Experienced Engineers," by Bruce E. Marsh, *Journal of Professional Issues in Engineering Education and Practice*, ASCE, April 1992.

"Safety Provisions in Codes for Design of Reinforced Concrete Structures," (with A. Scanlon), *Design of Concrete Structures for Serviceability and Safety*, SP-133, American Concrete Institute, 1992, Detroit, pp. 33-44.

"Markov Decision Processes in Structural Optimization," (with Z. Tao and J. Ellis), *Probabilistic Mechanics and Structural and Geotechnical Reliability*, Y.K. Lin, Editor, ASCE, 1992, Denver, pp. 539-542.

"Reliability-Based Life Cycle Costing in Structural Design," (with Z. Tao and J. Ellis), ICOSSAR 93, August 1993, Innsbruck, pp. 685-692.

"Structural Reliability Analysis of Nonlinear Systems," (with G. Turk and M. Ramirez), ICOSSAR 93, August 1993, Innsbruck, pp. 1345-1352.

"Modal Failure Probability and System Performance," (with W. Wang and M. Ramirez), *Structural Engineering in Natural Hazards Mitigation*, A. H-S. Ang and R. Villaverde, Editors, ASCE, 1993, Irvine, California, pp. 1312-1317.

"Reliability Analysis of Load-Path Dependent Structures," (with W. Wang and M. Ramirez), *Reliability and Optimization of Structural Systems*, R. Rackwitz, G. Augusti and A. Borri, eds. Chapman and Hall, 1995, pp. 281-288.

"Reanalysis of Rigid Frame Structures by Virtual Distortion Method," (with P. Makode and M. Ramirez), *AISS/USAF/NASA/ISSMO Symposium Proceedings*, 1994.

"Structural Reliability Evaluation with Maintenance Actions," (with Z. Tao and J. Ellis), Proceedings, ASCE Structures Congress, 1995, Boston, pp. 575-590.

"Plastic-Hinge Analysis of Frames by Virtual Distortions," (with P. Makode and M. Ramirez), ASCE Engineering Mechanics Conference, 1995, pp. 847-850.

"A Partially Observable Markov Decision Process Model for Bridge Inspection and Maintenance," (with J. Ellis and M. Jiang), ICASP 7 Proceedings, 1995, pp.1523-1528.

- “Optimal Rehabilitation of Locally Damaged Structures using the Pseudo Distortion Method,” (with P. Makode and M. Ramirez), Proceedings, ASCE Structures Congress, 1996, pp. 606-612.
- “Reliability-Based Structural System Optimization: State-of-the-Art versus State-of-the-Practice,” (with D. Frangopol), Proceedings, ASCE Conference on Analysis and Computation, 1996, pp. 67-78.
- “Including Inspection Imperfection in Optimizing Structural Management Policies,” (with M. Jiang and J. Ellis), 7th Specialty Conference on Probabilistic Mechanics and Structural Reliability, ASCE, August 1996, Worcester, Massachusetts, pp. 368-371.
- “Reliability and Optimization of Frame Structures using the Pseudo Distortion Method,” (with P. Makode and M. Ramirez), *Reliability and Optimization of Structural Systems*, D. Frangopol, R. Corotis and R. Rackwitz, editors, Pergamon, 1997, pp. 231-238.
- “Extreme Wind Estimation; Theoretical Considerations,” (with A. Dougherty), 8th International Conference on Structural Safety and Reliability, November 1997, Kyoto, pp. 1351-1358.
- “Reliability-Based Inspection and Repair Management Strategies,” (with M. Jiang and J. Ellis), 7th International Conference on Structural Safety and Reliability, November 1997, Kyoto, pp. 143-150.
- “A Markov Decision Model for Life-Cycle Cost,” (with M. Jiang and J. Ellis), Structural Engineers World Congress, July 1998, San Francisco, CD Rom.
- “Seismic Rehabilitation of Frame Structures Using the Pseudo Distortion Method,” (with P. Makode and M. Ramirez), Structural Engineers World Congress, July 1998, San Francisco, CD Rom.
- “Extreme Value Theory - Application to Design Wind Prediction,” (with W. Xu and A. Dougherty), Third International Conference on Computational Stochastic Mechanics, CSM’98, June 1998, Santorini, *Computational Stochastic Mechanics*, P. D. Spanos, Editor, Balkema, Rotterdam, 1999, pp. 397-404.
- “Extreme Value Theory and Mixed Distributions - Applications,” (with A.M. Dougherty and L.M. Schwartz), *Applications of Statistics and Probability ICASP 8*, R. Melchers and M. Stewart, Editors, Balkema, Rotterdam, 2000, pp. 27-33.
- “Simplified Stochastic Modeling and Simulation of Unidirectional Fiber Reinforced Composites,” (with G. Camata and E. Spacone), *Computational Stochastic Mechanics*, P. D. Spanos and G. Deodatis, Editors, Millpress, Rotterdam, 2003, pp. 99-105.
- “The Political Realities of Life Cycle Costing,” *Bridge Maintenance, Safety and Management*, J.R. Casas, D.M. Frangopol and A.S. Nowak, Editors, International Center for Numerical Methods in Engineering, 2002, Barcelona, Spain, CD Rom.
- “Risk-Setting Policy Strategies for Hazards,” *Life-Cycle Performance of Deteriorating Structures*, D. M. Frangopol, E. Brühwiler, M. H. Faber and B. Adey, Editors, ASCE, Reston, Virginia, 2003, pp. 1-8.

“Risk and Uncertainty,” *Applications of Statistics and Probability in Civil Engineering*, A. Der Kiureghian, S. Madanat and J. M. Pestana, Editors, Millpress, Rotterdam, 2003, pp. 781-786.

“Socially Relevant Structural Safety,” *Applications of Statistics and Probability in Civil Engineering*, A. Der Kiureghian, S. Madanat and J. M. Pestana, Editors, Millpress, Rotterdam, 2003, pp. 15-24.

“Life-Cycle Perspective for Buildings: Is it Possible?” ASCE Structures Congress, May 2004, Nashville, TN.

“Political Management Issues and Societal Risk Trade-off for the Built Environment,” PSAM7/ESREL’04, 14-18 June 2004, Berlin, Germany.

“Modeling of Risk-Based Inspection, Maintenance and Life-Cycle Cost with Partial Observability,” (with J.H. Ellis and M. Jiang), ASCE Joint Specialty Conference on Probabilistic Mechanics and Structural Reliability, July 26-28, 2004, Sandia Laboratories, Albuquerque, NM.

“Structural Risk Calibration,” ASCE Joint Specialty Conference on Probabilistic Mechanics and Structural Reliability, July 26-28, 2004, Sandia Laboratories, Albuquerque, NM.

“Societal Trade-off Decisions and Life-Cycle Costs,” 2nd International Conference on Bridge Maintenance, Safety and Management, 19-22 October, 2004, Kyoto, Japan.

“Estimating Structural Reliability Under Hurricane Wind Hazard: Applications to Wood Structures,” (with B. Rajagopalan, E. Ou and D.M. Frangopol), Proceedings of the Ninth ASCE Joint Specialty Conference on Probabilistic Mechanics and Structural Reliability, July 26-28, 2004, Albuquerque, NM CD-ROM.

“Socio-Economic Disparities in Community Consequences to Natural Disasters,” (with E. Enarson), International Forum on Engineering Decision Making, December 5-9, 2004, Stoos, Switzerland

“Is Investment in Seismic Design/Retrofit Oversold?” ASCE Structures Congress, April 20-24, 2005, New York, published in CD-ROM, 2005 *Metropolis and Beyond*.

“Discount Rate Issues for Life-Cycle Decision-Making,” (with D. Gransberg), in *Advances in Life-Cycle Cost Analysis and Design of Civil Infrastructure Systems*, A. Nowak, D. Frangopol and P. Laumet, Editors, Proceedings of the International Workshop, May 8-11, 2005, Cocoa Beach, Florida.

“Reliability, Risk or Reality?” in *Advances in Reliability and Optimization of Structural Systems*, J. Sorensen and D. Frangopol, Editors, Taylor and Francis, London, pp 1-15, IFIP, 12th Working Conference on Reliability and Optimization of Structural Systems, May 22-25, 2005, Aalborg, Denmark.

“The Role of Risk Perception in Built Environment Risk Management,” in *Safety and Reliability of Engineering Systems and Structures*, G. Augusti, G. Schueller and M. Ciampoli, Editors, Proceedings of the 9th International Conference on Structural Safety and Reliability, , 19-23 June, 2005, Rome, Italy.

“Public versus Private Discounting for Life-Cycle Cost,” in *Safety and Reliability of Engineering Systems and Structures*, G. Augusti, G. Schueller and M. Ciampoli, Editors, Proceedings of the 9th International Conference on Structural Safety and Reliability, , 19-23 June, 2005, Rome, Italy.

“Optimization Approach to the use of Goodness-of-Fit Test,” (with K. Chou and E. Ingram), in *Safety and Reliability of Engineering Systems and Structures*, G. Augusti, G. Schueller and M. Ciampoli, Editors, Proceedings of the 9th International Conference on Structural Safety and Reliability, , 19-23 June, 2005, Rome, Italy.

“Risk and Risk Perception for Low Probability, High Consequence Events in the Built Environment,” book chapter in *Recent Developments in Reliability-Based Civil Engineering*, World Scientific, Singapore, 2006.

“Reliability,” (with C. Mitcham and A. Briggles), chapter in *Encyclopedia of Science, Technology, and Ethics*, Macmillan Reference USA, Farmington Hills, Michigan, 2005, pp 1595-1599.

“The Evaluation of User Costs Related to Time Delays and Their Effect on Spatially Distributed Transportation Asset Management,” (with A. Trzcinski), International Forum on Engineering Decision Making, 26-29 April, 2006, Lake Louise, Canada.

“Selling Life-Cycle Concepts within the Political System,” 3rd International Conference on Bridge Maintenance, Safety and Management, 16-19 July, 2006, Porto, Portugal.

“Risk Communication with Generalized Uncertainty and Linguistics,” Workshop on Risk Acceptance and Risk Communication, Stanford University, March, 2007.

“The Effect of Rice Husk Ash on Mechanical Properties of Concrete under High Temperatures,” (with E. Ou and Y. Xi), ASCE Engineering Mechanics Division Conference, June, 2007, Blacksburg, Virginia.

“Sustainable Infrastructure Development for Guizhou Province in Southwest China: A Life Cycle Approach,” (with E. Ou and Y. Xi), *Applications of Statistics and Probability ICASP 10*, July, 2007, Tokyo, Japan.

“Risk Issues in the Built Structural Environment,” International Conference on Analysis and Risk Management in Production Activities, October, 2007, Porto, Portugal.

“Multiple-Attribute Aspects for Risk Assessment of Natural Hazards,” (with E. Hammel), International Forum on Engineering Decision Making, December, 2007, Port Stephens, Australia.

“The Role of Risk Perception in Tradeoffs for Earthquakes and Other Hazards,” (with E. Hammel), 14th World Conference on Earthquake Engineering, October, 2008, Beijing, China.

“Political Issues for Sustainable Hazards Policy,” International Forum on Engineering Decision Making, May 2009, Hakone, Japan.

“Variability of Deformation Demand with Ground Motion Intensity,” (with C. Cantagallo, G. Camata and E. Spacone), 6th Computational Stochastic Mechanics Conference, June, 2010, Rhodes, Greece.

“Practical Bridge Management Investment Strategies: A Life Cycle Approach Illustrated for Paris,” (with G. Vacheyroux), 5th International Conference on Bridge Maintenance, Safety and Management, July, 2010, Philadelphia.

“A Systems Approach to Assessing the Sustainability of the Grand Canal of China,” (with N. Tsung, P. Chinowsky and B. Amadei), Proceedings, 5th International Conference on Bridge Maintenance, Safety and Management, July, 2010, Philadelphia, pp 1269-1276.

“Practical Decision Theory Considerations for Community Hazard Reduction,” International Forum on Engineering Decision Making, December 2010, St. Gallen, Switzerland.

“The Relationship between Hazards Vulnerability and Stage of Economic Development in Haiti and Chile,” (with Lan Nguyen), ASCE International Conference on Vulnerability and Risk Analysis and Management (ICVRAM), April, 2011, Maryland.

“Conceptual and Analytical Differences between Resiliency and Reliability for Seismic Hazards,” ASCE Structures Congress, April, 2011, Las Vegas.

“Political Pitfalls in Hazards Planning,” *Applications of Statistics and Probability*, ICASP 11, August, 2011, Zurich, Switzerland.

“The Role of Uncertainty in the Political Process for Risk Investment Decisions,” (with H. Bonstrom and K. Porter), *Applications of Statistics and Probability*, ICASP 11, August, 2011, Zurich, Switzerland.

“Rebuilding L’Aquila following the 2009 Earthquake: Priorities and Perspectives,” (with A.B. Liel, J. Sutton, G. Camata, E. Spacone and R. Bricker-Ford), ICASP 11, August, 2011, Zurich, Switzerland.

“Structural Reliability and Sustainable Resilience,” (with H. Bonstrom), ASCE Structures Congress, March, 2012, Chicago.

“Overcoming Public and Political Challenges for Natural Hazard Risk Investment Decisions,” (with H. Bonstrom and K. Porter), Asian Pacific Symposium on Structural Reliability and its Applications, May, 2012, Singapore.

“Case Study of Interconnected Urban Infrastructure Vulnerability to Hazards,” (with A. Rein) Asian Pacific Symposium on Structural Reliability and its Applications, May, 2012, Singapore.

“Reliability Challenges of Confined Masonry,” (with L. Nguyen and G. Camata), ASCE Joint Specialty Conference on Probabilistic Mechanics and Structural Reliability, June, 2012, Notre Dame.

“Seismic Demand Uncertainty Provided by Ground Motion Intensity Measure,” (with C. Cantagallo, G. Camata and E. Spacone), World Conference on Earthquake Engineering, September, 2012, Lisbon.

“Robustness versus Resilience: Investments in Infrastructure Systems,” ASCE ATC+SEI Advances in Hurricane Engineering Conference, October, 2012, Miami.

“Regional Hazard Damage Estimation Using System Reliability,” (with H. Bonstrom), ASCE Structures Congress, May, 2013, Pittsburgh.

“A Systems Reliability Approach to Portfolio Damage Assessment,” (with H. Bonstrom), 11th International Conference on Structural Safety and Reliability, June, 2013, New York.

“Uncertainty Characterization for Structural Systems,” (with E. Ullmer), 11th International Conference on Structural Safety and Reliability, June, 2013, New York.

“Risk Perception of Natural Hazards: Effective Communication of U.S. Regional Consequences and Risks,” (with D. Oliver), 11th International Conference on Structural Safety and Reliability, June, 2013, New York.

“Finite Element Analysis Model and Future uses for Confined Masonry,” (with L. Nguyen and G. Camata), 11th International Conference on Structural Safety and Reliability, June, 2013, New York.

“Uncertainty Characterization for Decisions in Engineering,” (with Emily Elwood), ASCE Engineering Mechanics Institute Conference, August, 2013, Evanston.

“Uncertainty Theories, Overview,” (with E. Elwood). *Encyclopedia of Earthquake Engineering*, M. Beer et al, Eds, Springer, 2015.

“Assessment of Topographic Site-Effects Using Recorded Ground Motions. Application to the E-ELT Telescope Site,” (with Cristina Cantagallo, Guido Camata, Enrico Spacone, Paolo Ghiretti and Franz Koch), 7th Computational Stochastic Mechanics Conference, June, 2014, Santorini, Greece.

“Extension of Form-Based Reliability to Building Seismic Loss Estimation and Portfolio Resilience,” Tenth U.S. National Conference on Earthquake Engineering, July 21-25, 2014, Anchorage, Alaska.

"Reliability." *Ethics, Science, Technology, and Engineering: A Global Resource*. Ed. J. Britt Holbrook. 2nd ed. Vol. 3. Farmington Hills, MI: Macmillan Reference USA, 2015. 580-584. Gale Virtual Reference Library. Web. 19 Sept. 2014.

“Resilience: Communities are More than a Portfolio of Buildings,” ASCE Structures Congress, May, 2015, Portland, Oregon

“Damage Indexes and Stiffness Degradation for Confined Masonry Shear Wall Structures,” (with Lan Nguyen and Guido Camata), 12th North American Masonry Conference, May 2015, Denver, Colorado

“A Clustering Approach to Identification of Seismic Building Damage Patterns for Concrete Structures,” (with Emily Elwood), ICASP12, July, 2015, Vancouver, Canada.

“Preliminary Extension of First Order Reliability Methods for Combined Seismic and Wind Hazard Loss Estimation for a Portfolio of Buildings,” (with Holly Bonstrom), ICASP12, July, 2015, Vancouver, Canada.

“Uncertainty Quantification of Seismic Structural Systems: The Role of Generalized Information Theory,” 16th World Conference on Earthquake Engineering, January, 2017, Santiago, Chile.

“Multiple Hazards and Social Vulnerability for the Denver Region,” (with Alena Rein Starrett), Proceedings, *ASCE Structures Congress 2017: Buildings and Special Structures*, J.G. Soules, Ed, April, 2017, Denver, Colorado.

“Communicating Community Infrastructure Risks,” 12th International Conference on Structural Safety and Reliability, August, 2017, Vienna.

“Planning for Community Resilience under Climate Uncertainty,” *Interdisciplinary Issues Related to Climate Change*, Springer, 2017, in press.

DISSERTATIONS SUPERVISED

A Bayesian Approach to Soils Engineering Problems,
by J. Neil Kay (with R.J. Krizek), 1971

Response of Multistory Buildings to Random Wind Forces,
by Michael J. O'Rourke (with R.A. Parmelee), 1972

Nonlinear Soil Behavior and its Effects on Soil-Structure Interaction,
by M.H. Farzin (with R.J. Krizek), 1973

Probabilistic Approach to One-Dimensional Consolidation Settlement,
by Houssam H. El-Moursi (with R.J. Krizek), 1975

A Study of the Stochastic Nature of Building Live Loads,
by Victor Jaria, 1978

Stochastic Analysis of Wind Characteristics for Energy Conversion,
by Arden B. Sigl, 1978

Application of Bayesian Analysis for Wind Energy Site Evaluation,
by Harish G. Rao, 1981

Reliability of Framed Structures Subject to Nonlinear Behavior,
by Tai-Yan Kam (with E.C. Rossow), 1982

Stochastic Analysis of Wind Characteristics at Wind Energy Conversion System Sites,
by Jiann-Jong Lou, 1982

Stochastic Load Processes with Nonlinear Structural Response,
by Karen C. Chou, 1983

Load Space Formulation of Reliability for Nonlinear Random Structural Systems,
by Tzyy Shan Lin, 1985

Reliability of Random Structural Systems and Failure Cost Design,
by Mehrdad Soltani, 1986

Extremum Methods of Structural Analysis for System Reliability Assessment,
by Avinash M. Nafday, 1987

Modal Coupling and Wind-Induced Vibration of Tall Buildings,
by M. Saiful Islam (with B. Ellingwood), 1988

Load Path Dependence in Structural Frames Subjected to Fluctuating Forces,

- by Tsau Y. Wang (with B. Ellingwood), 1989
- Critical Excitations of Structural Systems,
by Mukund Srinivasan (with B. Ellingwood), 1989
- Analysis of Structural System Reliability with Stochastic Programming,
by James J. Zimmerman (with J.H. Ellis), 1991
- Reliability-Based Structural Optimization with Markov Decision Processes,
by Zongwei Tao (with J.H. Ellis), 1993
- Structural System Reliability: A Study of Several Important Issues,
by Wei Wang (with M. Ramirez), 1993
- Partially Observable Markov Decision Process Models for Structural Management Policies and Design,
by Mingxiang Jiang (with J.H. Ellis), 1995
- Nonlinear Analysis of Frame Structures by Pseudo Distortions,
by Prafulla Makode (with M. Ramirez), 1995
- Sustainable Infrastructure Materials: A Life Cycle Assessment Approach,
by Chih-Sheng Ou (with Yunping Xi), 2007
- A Systems Approach to Assessing the Sustainability of the Grand Canal of China,
by Nilo Tsung (with Bernard Amadei and Paul Chinowsky), 2010
- A First-Order Reliability Approach to Building Portfolio Loss Estimation and Mitigation Prioritization
by Holly Bonstrom, 2013
- Confined Masonry: Theoretical Fundamentals, Experimental Test, Finite Element Models, and Future uses
By Lan T. Nguyen, 2014
- Fuzzy Classification and Fuzzy Pattern Recognition of Seismic Damage to Concrete Structures
By Emily D. Elwood, 2015

M.S. THESES SUPERVISED

- Statistical Analysis of Soil Compressibility,
by Jose H. Salazar Espinosa (with R.J. Krizek), 1973
- Statistical Analyses of Index Properties and Compressibility of Soils,
by Amr S. Azzouz (with R.J. Krizek), 1974
- Approximate Dynamic Analysis of an offshore Tower,
by Cheryl H. Martin, 1975
- Analysis of Hydrologic Factors Influencing Flood Levels,
by David R. Descoteaux, 1975
- Characteristics of Multiple Vehicle Entry into a Single Gap at Stop Sign Locations,
by Craig E. Bauer (with D.S. Berry), 1975
- Probability Models for Live Loads in Buildings,
by Viresh A. Doshi, 1976
- Analysis of Wind Characteristics for Energy Conversion Sites,
by Michael P. Cohen, 1976
- An Evaluation of Freeway Merging Safety As Influenced by Ramp Metering Control,
by Bart T. Cima (with D.S. Berry), 1976
- The Response of Simple Systems to Nonstationary Excitation,
by Thomas A. Marshall, 1977
- Statistical Models for Wind Energy Site Surveys,
by Joel Klein, 1978
- A Probabilistic Determination of Design Live Loads for Buildings,
by Philip L. Chalk, 1979
- Survey Methodology and Reliability Analysis for Site Wind Characteristics,
by Danny J. Won, 1979
- Simulation of Wind Speed and Array Power at Wind Energy Conversion Sites,
by Karen C. Chou, 1980
- A Probabilistic Basis for Live Load Reduction in Office Buildings,
by Carl J. Bova, 1980
- A Probabilistic Basis for Area-Dependent Design Live Loads,
by Michael E. Harris, 1980

- Probabilistic Load Duration Model for Design Live Loads,
by Wen-Yang Tsay, 1981
- Reliability Analysis of Framed Structures Using the Probabilistic Network Evaluation Technique,
by Christine McIntosh, 1982
- Probabilistic Basis of Partial Resistance Factors for Use in Concrete Design,
by Morris S. Israel (with B.R. Ellingwood), 1986
- Computational Methods in Optimization of Structural Frames under Multiple Stress Constraints,
by B. Aydin Akbora, 1990
- Alternative Methodology for Time Valuation Associated with Highway User Costs,
by A. Trzcinski, 2006
- A Multi-Attribute Framework for Risk Analysis of Natural Hazards,
by Evan Hammel, 2007
- Overcoming Public and Political Challenges for Natural Hazard Risk Investment Decisions
by Holly Bonstrom (with Keith Porter), 2011
- The Expected and Extreme Losses due to Natural Hazards
by Jennifer Jones, 2011
- Perception of Risk of Natural Hazards
by Maura Hurley, 2011
- The Relationship between Seismic Hazard Vulnerability and Stage of Economic Development: Illustration
for Three Countries
by Lan Nguyen, 2011
- Identifying Infrastructure Interdependencies and social vulnerabilities in Denver, Colorado through
Examining the Impact of Natural and Man-Made Stressors Applicable to the Region
by Alena Rein, 2011
- Risk Perception and Effective Communication of Consequences for US Natural Hazards
by Daniel Oliver, 2013
- Risk Analysis of Mast-Arm Structures
by Abhishek Paul, 2013
- Development and Illustration of a Risk-Based Framework for Use by the Colorado Department of
Transportation's Built Facilities
by Yolanda Chia-Yi Lin (with Abbie Liel), 2014

Multi-Hazard Mapping of the United States
by Daniel J. Hahn, 2015

INVITED SEMINARS

"First Passage Considerations of Nonstationary Stochastic Processes," Theoretical and Applied Mechanics Colloquium, Northwestern University, 1971

"Floor Live Loads," Structural Design Loads Institute, University of Wisconsin, 1972, 1976, 1979, 1981

"Soil Culvert Interaction of Buried Concrete Pipe," Federally Coordinated Research Review Conference, San Francisco, 1973

"Stochastic Modelling of Site Wind Characteristics," ERDA/NSF Wind Energy Conversion Systems Workshop, Washington, 1975

"Wind Energy Conversion Systems," ASCE Illinois Section Meeting, Chicago, 1975

"Stochastic Considerations in Site Survey Design," ERDA Wind Energy Conversion systems Workshop and Conference, Washington, 1977

"Structural Reliability: Designing for Uncertainty," Civil Engineering Seminar, Illinois Institute of Technology, 1977

"Probability and the Design of Buildings," Center for Statistics and Probability Seminar, Northwestern University, 1977

"Designing for Natural Hazards," Structural Use of Wood in Adverse Environments, Vancouver, Canada, 1978

"Structural Reliability: Designing for Uncertainty," Structural Engineering Seminar, Cornell University, 1978

"Live Loads - Far From Dead," ASCE Illinois Section Meeting, Chicago, 1979

"Structural Reliability - Applications and Implications," Materials Engineering Seminar, University of Illinois at Chicago Circle, 1980

"Random Process Treatment of Structural Loads," Civil Engineering Seminar, Vanderbilt University, 1981

"Load Combinations," Design Loads for Structures, University of Wisconsin, 1981

"Structural Reliability and Live Loads," University of Delaware, 1982

"Wind Energy," ASCE National Capital Section, 1983

"Random Processes in Structural Engineering," University of Delaware, 1983

"Structural Live Load Modeling and System Reliability," Virginia Polytechnic Institute, 1984

"Stochastic Structures - Why Your Building Will Fall Down," ASCE Maryland Section, 1984

"Structural Load Modeling and System Reliability," Cairo University, 1985

"Structural Reliability - A Systems Approach," Syracuse University, 1985

"Reliability Considerations of Redundant Structural Systems," Rice University, 1987

"Structural Systems Reliability and Optimization," Northwestern University & Catholic University, 1989

"Engineering Education and the Role of the Professional," Engineering Society of Baltimore, 1990

"Several Subtleties of Structural System Safety," University of Notre Dame, 1993

"Some Reliability and Optimization Concerns with Structural Systems," Northwestern University, 1995

"Integrated Teaching and Learning; A New Learning Philosophy," Boulder Rotary Club, 1996

"Structural Optimization: A Lifetime Project," International Federation for Information Processing Conference on Safety and Reliability of Structures, Boulder, Colorado, 1996

"Structural Reliability: Building Safety or Job Security," 7th Specialty Conference on Probabilistic Mechanics and Structural Reliability, ASCE, Worcester, Massachusetts, 1996

"From Renaissance to Reliability," 8th International Conference on Structural Safety and Reliability, Newport Beach, California, 2001

"Risk: Society's or Yours," NSF Earthquake Engineering Research Centers, Summer Research Experience for Undergraduates, Annual Conference, 2002.

"Structural Safety; Is There a Role for the Engineer?" University of Notre Dame, South Bend, IN, 2003

"Safety of Structures; Is Society Willing to Listen?" Northwestern University, Evanston, IL, 2003

"Risk Issues in the Built Environment" Florida Atlantic University, Pennsylvania State University, Texas Tech University, The Johns Hopkins University: 2007

"The Art of Communicating Effectively with Deans and Other Demons," ASCE National Civil Engineering Department Heads Meeting, 2007

"Risk is a Four-Letter Word: Multi-Attribute Aspects for Natural Hazards, U.S. Army Corps of Engineers, 2008

“Natural Hazards – Managing Societal Risk,” University of Rome, University of Naples, University of Pescara, October, 2009.

“Risk, Reliability and Life Cycle Engineering,” Tongji University, Shanghai, China, June, 2011.

“Societal and Political Issues in Addressing Infrastructure Risk,” University of Nebraska, October, 2011

“Natural Hazard Risk: Public Perceptions and Political Perversities,” Lehigh University, Bethlehem, Pennsylvania, February, 2012.

PAPERS PRESENTED AT PROFESSIONAL MEETINGS

(Only those not listed under conference proceedings)

"First Passage of Nonstationary Random Processes," (with E.H. Vanmarcke and C.A. Cornell), ASCE, National Structural Engineering Meeting, 1972

"The Iowa Deflection Formula: An Appraisal," (with R.A. Parmelee), Highway Research Board Annual Meeting, 1973

"A Study of the Analytical and Experimental Evaluation of E'," (with R.A. Parmelee), Highway Research Board Annual Meeting, 1974

"On the Time-Dependent Frequency Content of Oscillator Response," (with R.A. Parmelee), ASCE, Specialty Conference on Probabilistic Methods in Engineering, 1974

"Probabilistic Approach to Prediction to Consolidation Settlement," (with H.H. El-Mouri and R.J. Krizek), Transportation Research Board Annual Meeting, 1975

"Time-Dependent Oscillator Response to Separable Excitation," (with T.A. Marshall), ASCE, National Structural Engineering Meeting, 1975

"Approximate Dynamic Modelling of an Offshore Tower," (with C.H. Martin), ASCE, National Structural Engineering Meeting, 1975

"Instrumentation and Testing of Concrete Pipe," (with R.A. Parmelee), ASCE, National Structural Engineering Meeting, 1975

"Uncertainty Analysis of Settlement Rate," (with H.H. El-Mouri and R.J. Krizek), Transportation Research Board Annual Meeting, 1976

"Soil Stresses and Displacements in a Concrete Pipe Trench Installation," (with T.H. Wenzel and R.J. Krizek), Transportation Research Board Annual Meeting, 1976

"Analysis and Measurement of Soil Behavior Around Buried Concrete Pipe," (with R.J. Krizek), American Society for Testing and Materials Symposium on Concrete Pipe and the Soil-Structure System, 1976

"Oscillator Response to Modulated Random Excitation," (with T.A. Marshall), ASCE, Engineering Mechanics Division Specialty Conference, 1976

"A Probabilistic Basis for Wind Power Siting Surveys," Third U.S. National Conference on Wind Engineering Research, 1978

"Updating Design Live Loads for the ANSI Standards," ASCE National Convention, 1980

"Effect of Solar Collectors on Snow and Ice Accumulation," ASCE International Convention, 1981

"Reliability of Structural Systems with Nonlinearities," (with E.C. Rossow), ASCE, Engineering Mechanics Division and ASME Specialty Conference, 1981

"Application of Bayesian Analysis to Site Wind Characterization," (with H.G. Rao), ASCE Convention, 1981

"Live Loads: A Stochastic Process Approach," Council on Tall Buildings and Urban Habitat, 1982"

"Live Loads - Far From Dead," ASCE Convention, 1982

"Reliability of Framed Structures Subject to Nonlinear Behavior," ASCE Convention, 1982

"Prediction of Generated Wind Turbine Power with High Frequency Wind Speed Series," International Time Series Meeting, 1983

"Structural System Reliability by Load Modeling," (with T.S. Lin), ASCE Annual Convention, October 1984, San Francisco

"Probability-Based Seismic Source Models," (with S. Nemat-Nasser and B. Rowshandel), ASCE Spring Convention, April 1986, Seattle

"Systems Reliability by Mathematical Programming Techniques," (with A. Nafday and J. Cohon), ASCE Structures Congress, September 1986, New Orleans

"Code Provisions for Safety of Concrete Structures," (with A. Scanlon), ACI Convention, November 1990, Philadelphia

"Optimization of Structural Frames under Multiple Stress Constraints," (with A. Akbora and J. Ellis), ASCE Structures Congress, May 1991, Indianapolis

"Probabilistic Considerations in the Evolution of the American Concrete Institute Building Code," Society for Risk Analysis Annual Meeting, Invited Paper, December 1991, Baltimore

"Stochastic Critical Excitations," (with M. Srinivasan and B. Ellingwood), ASCE Specialty Conference on Probabilistic Mechanics and Structural & Geotechnical Reliability, July 1992, Denver

"Application of Extreme Value Theory to Structural System Reliability Analysis," (with W. Wang and M. Ramirez), Conference on Extreme Value Theory and its Applications, NIST, May 1993, Gaithersburg

"Sensitivity of Nonlinear Structures at Collapse," (with W. Wang and M. Ramirez), U.S. National Congress of Applied Mechanics, June 1994, Seattle

“Reliability and Optimization of Frame Structures using the Pseudo Distortion Method,” (with P. Makode and M. Ramirez), IFIP, April 1996, Boulder

“Societal Tradeoffs of Safety and Cost: The Role of Design Codes and Sustainability,” US-New Zealand Workshop on Civil Infrastructure Systems, October 2001, Christchurch, New Zealand

“The Political Realities of Life Cycle Costing,” First International Conference on Bridge Maintenance, Safety and Management, July 2002, Barcelona, Spain

“Determining Reliable Design Loads for Natural Phenomena,” (with A. Dougherty). ASCE Structures Congress, April 2002, Denver, Colorado

“Cost, Performance and Safety; Are Metrics Valid?” ASCE Structures Congress, May 2003, Seattle, Washington

“Risks in the Built Environment: Who Decides?” First World Congress on Risk Analysis, June 2003, Brussels, Belgium

“Political Management Issues and Societal Risk Trade-off for the Built Environment,” PSAM7/ESREL’04, 14-18 June 2004, Berlin, Germany

“Structural Safety: Soliloquy, Sopition or Social Sensibility?” C. Allin Cornell Symposium, Stanford University, October, 2005, Palo Alto, California

“Is Structural Reliability a Professional Responsibility?” American Concrete Institute Fall Convention, November, 2006, Denver, Colorado.

“Sensitivity of Structural Performance to Multiple Hazards,” (with H. Bonstrom), ASCE Structures Congress, May, 2013, Pittsburgh.

“Multi-Hazard Consequence Mapping for the United States,” (with Dan Hahn and Emmanuelle Viaud), International Forum on Engineering Decision Making, May 2015, Kyoto, Japan.