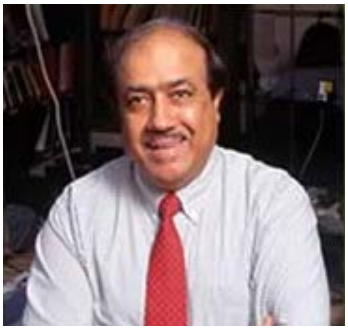

CURRICULUM VITAE

NAME

Ahsan Kareem (United States Citizen)

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and Geological Sciences
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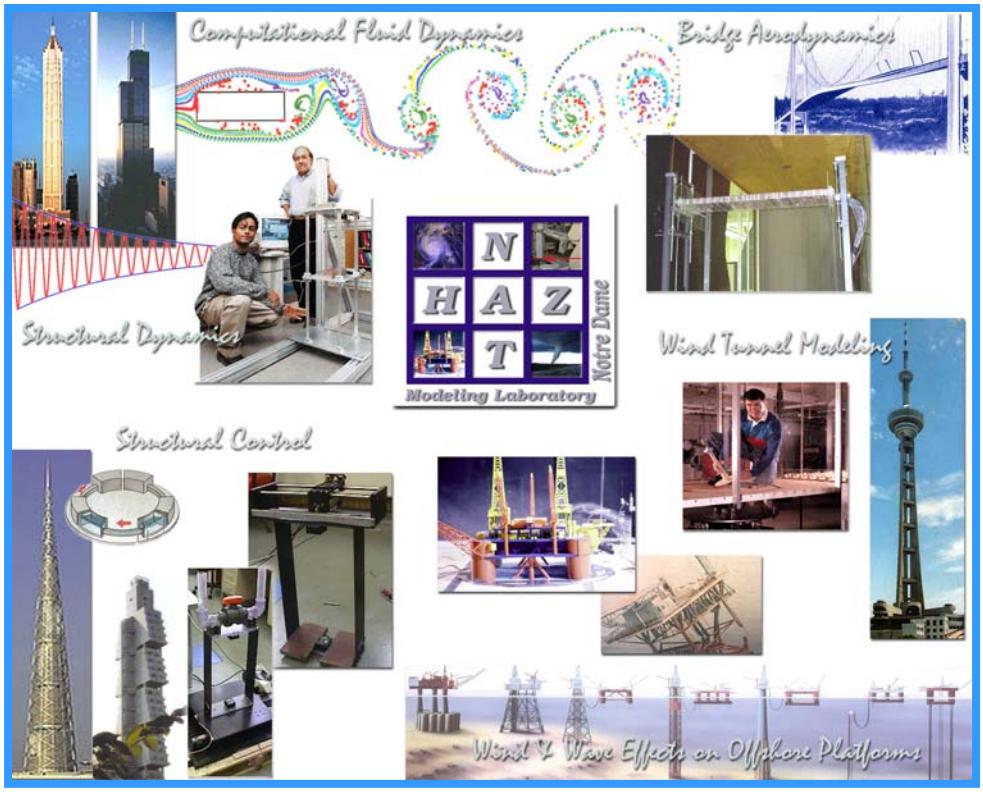
NatHaz Modeling Laboratory
Dynamic Load Simulator/
Shaking Table/Full-Scale
Monitoring System
103 Cushing Hall
Tel (574) 631-8453
Atmospheric Wind Tunnel
Hessert Laboratory for
Aerospace Research

www.nd.edu/~nathaz
windycity.ce.nd.edu
aerodata.ce.nd.edu
www.vortex-winds.org



EDUCATION

Ph.D., Civil Engineering (Structural and Fluid Dynamics), Colorado State University, December 1978.

M.Sc., Civil Engineering (Structural Engineering), University of Hawaii with joint program at MIT, June 1975.

B.Sc., Civil Engineering, with Distinction, (Structural Engineering), W. Pakistan University of Engineering and Technology, May 1968.

PROFESSIONAL EXPERIENCE

2002-	Robert M. Moran Professor of Engineering, Department of Civil Engineering and Geological Sciences, University of Notre Dame
1999-02	Robert M. Moran Professor and Chair, Department of Civil Engineering and Geological Sciences, University of Notre Dame
1990-99	Professor, Department of Civil Engineering and Geological Sciences, University of Notre Dame
1990	Visiting Professor, University of Tokyo, Tokyo, Japan
1990-1992	Adjunct Professor, Department of Civil Engineering, University of Houston
1989-1990	Professor and Director Structural Aerodynamics and Ocean Systems Modeling Laboratory (SAOSML), Department of Civil Engineering, University of Houston
1984-1989	Associate Professor and Director, SAOSML, Department of Civil Engineering, University of Houston
1988-1990	Lecturer, Department of Civil Engineering, Rice University
1978-1984	Assistant Professor, Department of Civil Engineering, University of Houston
1977-1978	Research Associate (Research Faculty), Department of Civil Engineering, Colorado State University
1973-1977	Graduate Research and Teaching Assistant, Colorado State University
1971-1973	Graduate Student, University of Hawaii and Massachusetts Institute of Technology
1968-1971	Design Engineer, Harza Engineering Company International

TECHNICAL EXPERTISE

Characterization and formulation of dynamic load effects via fundamental experimental, laboratory and full-scale measurements. Dynamic loads due to wind, waves and earthquakes on tall buildings, long span bridges, offshore structures and other structures. Wind hazard mitigation and applications of cyberinfrastructure for pooling and coordination of computational resources, data management and archiving, and visualization tools into a web-accessible framework. Development of virtual organizations, crowd sourcing and design codes and standards.

Fluid-Structure Interactions/Aeroelasticity/Hydroelasticity/Turbulence

Fundamental contributions in the area of fluid-structure interactions, aeroelasticity, bluff body aerodynamics hydrodynamic load effects and turbulence.

Examples:

- Aerodynamics of prismatic 2-D and 3-D static and oscillating prisms of varying aspect ratios and the role turbulence utilizing wind tunnel modeling and CFD
- Modeling of spatio-temporal pressure fields around 3-D prisms in boundary layer flows
- Aeroelasticity of prismatic structures, Vortex-Induced Vibrations (VIV) and Galloping
- Buffeting and flutter of long span bridge decks
- Non-linear flutter, role of turbulence on flutter and post flutter analysis
- Developed a novel unified reduced-order model for flutter-buffeting, VIV, Rain induced vibration utilizing Volterra kernels
- Shape optimization of bluff structures to minimize aerodynamic loads utilizing CFD embedded with gradient based and surrogate based optimization schemes
- Topology optimization of bridge decks and high-rise building structural systems
- Schemes for analysis, modeling and simulation of non-stationary (transient), non-Gaussian and non-linear features inherent to extreme loading events
- Characterization of turbulence features in landfalling and over the ocean hurricanes/typhoons and downburst events on land, i.e., turbulence intensity and scales, spectral description and flow-field kinematics. Identification low-level rolls in landfalling hurricanes/typhoon responsible for localized heavy damage with spatial periodicity

Dynamic Wind Load Effects

Developed prediction methods for evaluating the response of tall buildings; long-span cable-supported bridges; complaint offshore structures under extreme environments and service loads.

Examples:

- Developed advanced analysis framework for coupled response analysis of building utilizing synchronous multi-point pressure measurement (SMPM) system or high frequency base balance (HFBB) derived data and pointed out and corrected the common problem with recent wind tunnel practice in combining modal contribution using earthquake engineering based CQC method as unlike earthquake loads components the wind loads components are partially correlated (**Buildings Dynamic Analysis).**
- Developed a new framework for equivalent static wind loads (ESWL) on buildings including coupled cases and bridges based on HFBB and SMPM **(Buildings and Bridges Analysis)**
- Developed advanced coupled flutter and buffeting response analysis framework for long-span bridges that takes into account nonlinearities of both aerodynamic and structural origins. **(Long-Span Bridges Dynamic Analysis).**
- Developed nonlinear bridge flutter analysis schemes. **(Long-Span Bridges Dynamic Analysis)**
- Unveiled underlying mechanisms in multi-modal coupled flutter through curve veering analysis of eigenvalues and vectors and developed closed form solutions. **(Dynamics of Long-span Bridges).**
- Developed a closed-form formula for estimating critical flutter wind speed of generic long span bridges that not only provides, for the first time, a theoretical basis of the well-known empirical "Selberg's formula", which is limited to bridges with flat plate sections, but also serves as its important extension to commonly used bridge deck sections **(Bridge Design)**.
- Experimentally measured for the first time the spatial correlation of self-excited forces which plays a major role in flutter estimation and cataloged the influence of turbulence on the correlation **(Long-Span Bridges/ Experimental)**.
- Introduced verification of in-situ behavior via full-scale monitoring of tall buildings using advanced technologies such as GPS and networked sensors, to validate design procedures. Developed ***SmartSync*** technologies to monitor real-time dynamics of some of the tallest structures in the world in real-time **(Full-Scale Monitoring of Dynamic response)**
- Conducted and/or investigated hurricane induced damage to high-rise cladding/envelope in Hurricanes: Alicia; Andrew; York; Katrina, Ike and established wind speed damage correlation **(Hurricanes & Structures)**
- Developed physical bench top facility involving a multi-fan wind tunnel for the generation of gust front winds. Developed improved understanding of transient loads and their quantification through experiments and data-driven models. **(Gust Fronts/ Load Effects).**
- Established the need and significance of the dynamic response of offshore structures to wind loads and developed an analysis framework starting with the first paper at OTC in 1980 **(Offshore Structures)**
- Developed models for dynamic wind load effects on structures: Towers, Chimneys, wind turbines, solar cells,(**Other Structures)**

Dynamic Wave Load Effects

Contributed to a wide range of topics in the areas of offshore dynamics.

Examples:

- Established in mid eighties a systematic analysis procedure for compliant offshore platforms (TLPs) subjected to simultaneous action of wind, waves and current loads including hull and tethers coupled dynamics involving nonlinearities of aerodynamic, hydrodynamic and structural origins in both time and frequency domain **(Dynamics of Coupled Systems)**.
- Advanced the frequency domain approach for these complex nonlinear systems, a first in the offshore industry that captured all significant nonlinear effects, e.g., drag induced, diffraction, drift and splash zone load effects at the instantaneous position of the platform utilizing equivalent quadratization and cubicization **(Dynamics of Deepwater Offshore Platforms)**.
- Dynamic load effects on wind turbines
- Utilized tri-variate Hermite polynomials in tandem with Volterra series expansion to model these load effects along with an innovative feedback approach to correct for instantaneous position of the platform in both time and frequency domains. **(Non-linear Random Vibration)**.
- Developed schemes for the diffraction of nonlinear random waves by circular cylinders and attendant load effects **(Wave Dynamics)**.
- Developed fundamental understanding and models for the "Ringing" response of TLPs **(Non-linear Random Vibration)**.
- Modeling the dynamics of nonlinear systems with symmetric and asymmetric nonlinearities utilizing Volterra Systems **(Non-linear Random Vibration)**.
- Analysis of nonlinear systems under deterministic and stochastic excitations utilizing attractors in phase space via Poincare mapping to delineate signatures of chaotic and periodic motions **(Non-linear Random Vibration)**.
- Modeling of non-linear systems utilizing Volterra Systems and innovative schemes for identification of Volterra kernels **(Non-linear Random Vibration)**

Damping Systems and Motion Control

Developed various motion control systems with applications to tall buildings and towers

Examples

- Developed passive semi-active and active strategies for mitigating structural motions through developments in control algorithms, e.g., model predictive control **(Motion Control).**
- Designed sloshing dampers for Knightsbridge Tower in Manila and Dallas Museum Tower in Dallas and validated their performance through "Hardware-in-the-loop" experiments and in full-scale (**Damping Systems**)
- Developed semi-active or adaptive tuned liquid column damper systems (**Damping Systems**)

- Developed a detailed analogy of nonlinear sloshing of fluid filled tanks used as dampers at higher amplitudes in terms of sloshing and slamming utilizing a linear and an impact damper, where the hardening affects are explained by transition of fluid from sloshing mode to periodic impact. **(Non-linear Dynamics)**
- Regenerative dampers for harvesting energy from TMDs (**Energy Harvesting)**

System Identification

- Developed wavelet-based system identification for engineering structures **(System Identification).**
- Delineated the efficacy of Hilbert and wavelet transforms in signal processing, system behavior analysis, extraction of signal embedded in noise and nonlinear signal analysis **(Time-Frequency Analysis)**.
- Development of "Dynamic Load Simulator" with multiple actuators capable of inducing correlated loads; conducted "Hardware-in-the-loop" experiments to physically model nonlinear components and interface them with computational model of the remaining system.
- Developed system identification using transformed singular value decomposition/principle component analysis in time-frequency domain **(Identification of Non-Stationary Data/Damping/Frequency)**.
- Developed Blind Source Separation based system identification for non-stationary systems in the time-frequency domain **(Identification of Non-Stationary Data/Damping/Frequency)**.

Simulation/Computational Methods/Stochastic Mechanics

- Developed efficient simulation schemes for random vector processes: stationary/non-stationary; Gaussian/Non-Gaussian; Conditional/Un-Conditional utilizing spectral and time-series methods in conjunction with a novel scheme named "Stochastic Decomposition."

Examples:

- Developed efficient Monte-Carlo based simulation schemes for the uni-variate, multi-variate and multi-dimensional Gaussian stationary and non-stationary processes **(Simulation).**
- Developed ARMA system modeling and simulation in wind effects **(Simulation).**
- State-Space modeling of combined buffeting and self-excited effects of bridges **(Simulation)**.
- Introduced "spectral correction" method that has led to subsequent developments by many others for the simulation of non-Gaussian unconditional, conditional multi-variate and random fields including, e.g., pressure fluctuations on structures, random ocean waves and soil moisture contents**(Non-Gaussian Simulations).**
- Utilized innovative wavelet based scheme and Hilbert transform nested with POD for the simulation of gust front winds and earthquakes **(Gust Fronts and earthquakes)**
- Developed system identification of transient systems **(System ID)**
- Introduced the Large Eddy Simulation (LES) Scheme for simulating numerically flow around and its load effects on prismatic building **(CFD)**.

- Developed High-Order time-frequency domain analysis using wavelets to capture transient nonlinear relationships between two measured processes like turbulence and pressures **(Higher-Order Analysis)**
- Simulation of multi-variate correlated non-Gaussian processes that match not only the cross-spectral features, but also the JPDF **(Non-Gaussian Simulations).**
- Developed computational schemes for shape (CFD based) and topology optimization of tall buildings under uncertainties (**CFD, Computational methods, Shape and topology optimization)**.

Uncertainty/Safety and Reliability/Risk Assessment

Developed schemes for the propagation of uncertainty in damping, reliability analysis under winds and pdf of extreme response of nonlinear ocean platforms with applications.

Example:

- Introduced the role of uncertainty in the analysis of wind-induced dynamic response of structures leading to reliability based analysis **(Safety and Reliability Analysis).**
- Introduced reliability based measures for the performance of buildings from human comfort considerations **(Probabilistic Design).**
- Safety and performance analysis of building cladding under extreme wind events **(Wind Speed Damage Correlation).**
- Developed peak factor for non-Gaussian narrow-banded and broad-banded processes.
- Development of load factors for the design of flexible structures in wind in light of uncertainties in system parameters and wind **(Code Based Design)**.
- Development of the pdf of extreme response of nonlinear systems, like TLPs in ocean environment based on higher order moments of the response derived from the Volterra series expansion of nonlinear components **(Probabilistic Response Analysis).**
- Developed probability evolution of a high-dimensional random space at mesoscale using parcel-based (**Nonlinear-random vibration**)
- Developed automated damage detection system based on high resolution aerial imagery involving advanced automated registration, light and color adjustment and damage identification for rapid post-hurricane loss estimates and recovery efforts (**Damage detection**)

Codes/Standards Cyberbased-Analysis and Design Technologies

Developed improved and implemented current and past versions of ASCE Standard on Wind Loads and developed web-based e- analysis and –design tools for promoting their usage in design practice.

Examples:

- Introduced closed-form expressions for Gust Effect Factor (GEF) in ASCE 7-05 and its predecessors and a new Gust Effect Factor in ASCE 7-05 and an alternate expression for the equivalent static loading which correctly represents the variation of widen loads along the height, which has been in part implemented in AIJ. Developed

a 3-D Gust Loading Factor for the along, across and torsional components **(ASCE 7-05-10)**.

- Developed and introduced an interactive web-based database for aerodynamic wind loads on tall buildings in ASCE 7 05 Commentary (http://aerodata.ce.nd.edu). The framework also evaluates dynamic response of buildings and equivalent static loads for given building dynamic features **(Buildings e-Design)**.
- Introduced a web-based portal for evaluating newly introduced Gust-Front Factor: A new framework for the analysis of wind load effects in gust-fronts (http://gff.ce.nd.edu**)**. This accounts for the contrasting velocity profile and transient dynamics of gust fronts and reduces to current gust GEF for non-gust front winds **(Gust Front Factor)**. Extended the concept to Generalized Gust Front Factor for application to any code.
- Developed web-based simulation portal (http://windsim.ce.nd.edu**)** to facilitate stochastic simulation of wind related processes without the need for user's familiarity with the theoretical background **(Web-Based Simulation).**
- Developed web-base portals for full-scale data monitoring, transfer, processing, mining and on-the-fly processing (http://windycity.ce.nd.edu; http://bdart.ce.nd.edu) **(Web-Based Data Acquisition, Analysis and Management)**
- Developing an Engineering Virtual Organization to reduce the toll of extreme winds on society VORTEX-Winds (www.vortex-winds.org). A cyber-collaboratory of the leading universities, organizations, firms and government agencies dedicated to mitigating the effects of extreme winds on society. VORTEX-Winds coordinates geographically dispersed e-analysis and design modules to enable automated, integrated analysis and design of structures to resist wind) **(Virtual Organizations)**.
- Developed web-based analysis of tall buildings utilizing databases involving high-frequency base balan
- Experimental work on wind loads on TLPs quantified the influence of interference among platform deck structures, lift induced moments and discrepancies in the recommendations of the codes and standards in offshore engineering **(Offshore Platforms)**
- Developed an extensible system for the management of long running scientific task with application to OpenFoam CFD software. The portal allows even novices to run basic CFD cases fro flow around bluff bodies (**CFD portal**).
- Developed citizen Engineering: Evolving OSS Practices to Engineering Design and analysis (**Cyberbased Technologies**)

TEACHING

Courses Taught

ENGI 1223	Computers and Programming (University of Houston)
ENGI 2332	Mechanics of Materials (University of Houston)
CIVE 3337	Theory of Structures (University of Houston)
CIVE 5397	Probability, Statistics, and Decision for Civil Engineering (University of

	Houston)
CIVE 6339	Introduction to Structural Dynamics (University of Houston)
CIVE 6349	Reliability and Safety of Structures (University of Houston)
CIVE 7338	Dynamics of Structures (University of Houston)
CIVE 7339	Topics in the Dynamics of Structures (University of Houston)
CIVI 512	Applications of Probability Theory (Rice University)
CE 336	Structural Mechanics I (University of Notre Dame)
CE 356	Structural Mechanics II (University of Notre Dame)
CE 476/576	Design of Structures to Resist Natural Disasters (University of Notre Dame)
CE 569	Advanced Structural Dynamics (University of Notre Dame)
CE 598	Wind Engineering (University of Notre Dame)
CE 67003	Topics in Risk and Reliability of Structures (University of Notre Dame)
CE 4010/ 7010	Analysis of Wobbly Structures: An Introduction to Structural Dynamics (University of Notre Dame)

PROFESSIONAL COURSES TAUGHT

Provisions for Dynamic Load Effects in ASCE 07, Professional School for Wind Effects, San Juan Puerto Rico, June 2009

Computational Methods in Wind Engineering, Technical University Opole, Poland, March, 2009.

Computational Methods in Wind Engineering, Bridge Engineering Department, Tongji University, Shanghai, PROC, November 21-23, 2007.

Motion Mitigation Devices in Structural Engineering, Bridge Engineering Department, Tongji University, Shanghai, PROC, November 21-23, 2007.

Computational Methods in Wind Engineering, Center of Excellence International Advanced Study Institute, Tokyo, Japan, March 5-9, 2007.

Motion Mitigation Devices in Structural Engineering, Center of Excellence International Advanced Study Institute, Tokyo, Japan, March 5-9, 2007.

Dynamics of Tall Buildings under Winds, Continuing Education Course at the 11th Americas Conference on Wind Engineering, Baton Rouge, Louisiana, May 31, 2005

Aerodynamic Tailoring of Tall buildings, SPACE, Universiti Teknology Malaysia, Advanced School for Professionals and Academicians, Kuala Lumpur, February 23-24, 2005

Wind Effects on Structures: The Next Frontiers, Croucher Foundation Advanced Study Institute, Hong Kong University of Science and Technology, 6-10, December 2004, 8-10, December 2005.

Wind-Excited and Aeroelastic Vibrations of Structures, EU Advanced School, Genoa, Italy, Department of Structural and Geotechnical Engineering, University of Genoa, June 12-16, 2000.

Design of Floating Production Systems, Austin, Texas, sponsored by the University of Texas and Norwegian Institute of Technology, October, 1991.

Wind Resistant Design of High-Rise Buildings, Taipei, sponsored by Building Research Institute, Taiwan, August, 1991.

Design of Steel Bins for the Storage of Bulk Solids at Sydney, Australia, Sydney, Australia, sponsored by University of Sydney, March, 1985.

Wind Loads on Buildings and Structures, Dallas and Houston, sponsored by Texas Tech University, October, 1984.

Wind Effects on Structures Special Reference to Caribbean, Mayaguez, P.R., sponsored by University of Puerto Rico, August, 1982.

SUPERVISION OF RESEARCH

Post-Doctoral/Research Fellows/Research Professors/Visiting Scholars

Name	Research Area	Inclusive Dates
Dr. D-K Kwon	Dynamic Wind Load Effects	2011-
Prof. Sang Hyun Lee	Active mass dampers	2013-2014
Dr. Kilje Jung	Bridge aerodynamics	2103-2014
Dr. Enrica Berardini	Dynamics of Tall Buildings	2011-
Dr. Seymour Spence	Dynamics/Optimization of Structures	2011-
Shouke Li	Longspan roofs	2011-2012
Dr. Shouying Li	Dynamics of Flexible Structures	2010-2011
Dr. H. Cao	Aerodynamic Damping of Structures	2010-2011
Lixia Li	Hurricane/Typhoon Wind Field	2010-2011
Dr. D. Wei	Computational Fluid Dynamics	2010-
Dr. Deepak Kumar	Random Vibrations	2009-
Professor H. Kozmar	Environmental Aerodynamics	2007-08
Professor Jae-Seung Hwang	Structural Dynamics	2006-07
Dr. Luigi Carassale	Nonlinear Stochastic Dynamics	2005-
Dr. Dae-Kun Kwon	Structural Dynamics	2001-
Prof. Heeduck Kim	Aerodynamics	2003-04

Prof. F. Haan, Jr.	Bridge Aerodynamics	2001-02
Prof. M. Kanda	Dynamic Load Effects	1999-01
Dr. Y. Zhou	Wind Loads & Building Codes	1998-01
Dr. X. Chen	Bridge/Building Aerodynamics	5/1/98-
Dr. K. Gurley	Stochastic Simulation	1997
Mr. M. Moubacher	Bridge Aerodynamics	1997
Mr. Katsutoshi Ohdo	Construction Safety	1997-98
Dr. J. D. Yoder	Dynamic Load Simulator	1996
Dr. Balaje Rao	Non Gaussian Analysis	1994
Prof. Young-Moon Kim	Tall Buildings	1993-94
Dr. S. Gomathinayagam	Analysis of Full-Scale Data	1993
Dr. T. L. Murlidharan	Conditional Simulation	1993
Dr. Johanes Suhardjo	Structural Control	1990-91
Dr. Yaqin Zhang	Finite Element Analysis	1989-90
Dr. Yousun Li	Probabilistic Dynamics	1988-89
Prof. El Sayed A. Mashally	Seismic Response Analysis	1989-90
Dr. Po Chien Lu	Structural Aerodynamics	1984-87
Dr. Wei-Joe Sun	Probabilistic Response of Structures	1984-86
Dr. John W. Cox	Offshore Engineering	1984-85
Mr. Zhendong Liu	Numerical Modeling	1990-92
Mr. Elias Saqan	Computer Code Development	1989-90
Mr. Ruey-Ming Chung	Experimental Methods	1987-88

Ph.D. Thesis Students

Name	Thesis Title	Graduation Year
Jeder Hsieh	Reliability of Concrete Chimneys under Winds	1983
Chii-Ming Cheng	Acrosswind Response of Towers and Stacks of Circular Cross-Section	1984
Yousun Li	Stochastic Response of Tension Leg Platforms to Wind and Wave Fields	1988
Chang Chun Hsieh	Probabilistic Response Analysis of Offshore Platforms to Wave Loading	1991
Jun Zhao	Response Statistics of Tension Leg Platform	1993
Xiaobing Song	Stochastic Response of Offshore Compliant Systems to Environmental Loads	1993
Dahai Yu	Numerical Modeling of Flow Around Structures	1997
Kurt Gurley*	Modeling Nonlinear Load Effects on Structures	1997
Mike Tognarelli	Non-Gaussian Response Statistics of Ocean Structures	1999
Katsutoshi Ohdo**	Influence of Wind on Construct-ability of Civil Structures	1999
Fred Haan	The Effects of Turbulence on the Aerodynamics of Long Span Bridges	2000
Swaroop Yalla	Liquid Dampers for Mitigation of Structural Response: Theoretical Development and Experimental Validation	2001
Gang Mei	Model Predictive Control Schemes	2001

	for the Mitigation of Natural Hazards: Theoretical and Experimental Studies	
Luigi Carassale****	Reliability of Nonlinear Systems	2002
Tracy Kijewski***	Full-Scale Measurements & System Identification: A Time-Frequency Perspective	2003
Lijuan Wang*****	Modeling, Analysis and Simulation of Transient Events	2007
Rachel Bashor	Dynamics of Tall Buildings	2011
Kyle Butler#	Transient Aerodynamic Load Effects	2010
Jim Thomas	Change Detection Using Aerial/Satellite Imagery	2012
Megan McCullough##	Multi-Hazard Resistant Design	2013 (expected)
Teng Wu	Non-Linear Aerodynamics Of Bridges	2013 (expected)
Yanlin Guo	Data to Knowledge: Interpretation Of Full-Scale Data	2015 (expected)
Chao Yin	Response Statistics of Non-Stationary and Non-Linear Structures	2015 (expected)
Sarah Bobby	Topology and Shape Optimization of Tall Buildings under Winds	2015 (expected)
Maria Gibbs	Dynamics of Pedestrian Bridges	2016 (expected)

Placement of Ph.D. Students/Postdoctoral Fellows

Jeder Hsieh	Vice-President Taiwan High Speed Rail Corporation Taipei, Taiwan

Chii-Ming Cheng	Professor and Director Former Department Chair Wind Engineering Research Center Department of Civil Engineering Tamkang University Taipei, Taiwan
Yousun Li	Principal Engineer Offshore R & D Shell Development Company Houston, TX
Chang Chun Hsieh	Engineering Consulting Practice Taipei, Taiwan
Jun Zhao	Investment Banker ChinaVest San Francisco/Shanghai

**Ph.D. awarded by the University of Tokyo, Japan.
***Office of Naval Research, Department of Defense Graduate Fellowship and Skidmore Owings & Merrill Fellowship; Eli J. and Helen Shaheen Graduate School award; R. D. Marshall, AAWE aawrd 2005.
****Ph.D. awarded by the University of Genoa, Italy
***** R. H. Scanlan AAWE Award 2009
# Kaneb Teaching Award*Received Notre Dame Alumni Research Award
Kaneb Teaching Award, Donnaville Teaching Award, Claire Booth Luce Fellowship; ASCE's Amman Fellowship

Xiaobing Song	Senior Engineer Offshore Systems American Bureau of Shipping Houston, TX
Dhai Yu	J. P. Morgan Chase New York, NY
Kurt Gurley	Associate Professor Department of Civil Engineering University of Florida Gainesville, FL
Michael Tognarelli	Senior Project Engineer BP Offshore Houston, TX

Katsutoshi Ohdo	Project Manager Construction Safety Division Ministry of Labor Government of Japan Tokyo, Japan
Fred Haan, Jr.	Associate Professor Department of Aerospace Engineering Iowa State University/Roseman Hull Ames, Iowa/IN
Swaroop Yalla	Morgan Stanley San Francisco, CA
Gang Mei	Project Engineer EI Taller Colaborativo P.C. Philadelphia, PA
Luigi Carassale	Assistant Professor Department of Civil Engineering University of Genoa Genoa, Italy
Tracy Kijewski-Correa	Linbeck Associate Professor Department of Civil Engineering and Geological Sciences University of Notre Dame Notre Dame, IN
Wei-Joe Sun	Project Manager Lockheed Martin Johnson Space Center Clear Lake, TX
Po-Chen Lu	Professor Department of Civil Engineering Tamkang University Taipei, Taiwan
El-Sayed Amin Mashaly	Professor Department of Structural Engineering Alexandria University Alexandria Egypt
Yaqin Zhang	Senior Engineer

	Shell Development Company Houston, TX
Johanes Suhardjo	Systems Engineer OIT/College of Engineering University of Notre Dame Notre Dame, IN
Xinzhong Chen	Associate Professor Department of Civil Engineering Texas Tech University Lubbock, TX
Yin Zhou	Risk Management Solutions, Inc. Palo Alto, CA
Luan Wang	Senior Engineer Technip, Houston, TX
Rachel Bashor	American Bureau of Shipping Houston, TX
Kyle Butler	AIR Worldwide, Boston, MA

MS. Thesis Students

Name	Thesis Title	Graduation Year
Chii-Ming Cheng	Wind Tunnel Modeling of Stacks of Circular Cross-Section	1982
Wilson Wan	Nonlinear Dynamic Response of a Tension Leg Platform Subjected to Wind Loading	1982
Patti Doucet	Wind Loads on Tension Leg Platforms (co-advisor)	1989
Michael DeKlotz	Response of Base Isolated Buildings with Tuned Mass Dampers	1991
Kurt Gurley	Probabilistic Analysis of Aero-Dynamic Response of Structures	1993

Michael Tognarelli	Equivalent Statistical Quadratization & Cubicization for Nonlinear Systems	1997
Dahai Yu	Numerical Simulation of Pressure Field Around Two-Dimensional Rectangular Prisms	1997
Scott Kabat	Analysis and Control of Wind Induced Response of Structures	1999
S. Yalla	Optimum Absorber Parameters for Tuned Liquid Column Dampers	2000
Tracy Kijewski	Mitigation of Motions of Tall Buildings with Specific Examples of Recent Applications	2000
Devin Brown	Full Scale Response of An 800 ft. Tall Building	2003
Tiphaine Williams	Dynamics of Tall Buildings	2003
Angel Cassigne	Smart Sync Inc (ESTEEM)	2012

MS. Project Students

Name	Thesis Title	Graduation Year
S. Vacek	Fiber-Reinforced Concrete Panels Subjected to Axial and Flexural Loads	1980
Zing Jin	System Simulation Using the Fast Fourier Transform	1981
D. Villarreal	Full-Scale and Analytical Analysis of Transmission Line Towers	1981
Fu-Ping Chyn	Dynamic Analysis of Plates Using Finite Element Method	1981
Ricardo Martinez	Comparing Building Code Requirements for Wind Uplift of Timber Roof Connections	1984

John Garland	Dynamic Analysis of Jacket Platforms During Transportation	1987

B.S. Project Students

Name	Thesis Title	Graduation Year
W. R. French	Investigation of Reserve Strength Reportedly Exhibited by Expansion-Type Aluminum Mullions Subjected to Flexural Loadings	1989
Doug Krause	Simulation of Random Processes	1990
John Ghia	Computation of Steady Forces on TLPs	1991
Scott Kabat	Numerical Simulation and Dynamic Effects	1995
Tracy Kijewski	Comparative Study of International Wind Loading Codes & Standards	1997

Participants Under NSF/Other Research Experiences for Undergraduate Programs

Name	Project Title
Elias Saqan University of Houston	Modeling of Wind Loads
Kenya Colley Texas A&M	Damage due to Hurricanes and Tornadoes
Christopher Brown Texas A&M	Climate Change and Natural Disasters
Mark Ellis Harvard University	Dynamics of Basic-Isolated Buildings
Barbara Allen Purdue University	Stochastic Modeling of Wind Loads
Elizabeth Collins	Response of Tall Buildings to Wind

Old Dominion University

Frank Rivera — Development of an Automated Wind Tunnel Turntable
University of Notre Dame

Mike Tognarelli — Development of an Automated Wind Tunnel Traverse System
University of Notre Dame

Sam A. Kline — Analysis of Multiple Mass Dampers
Washington University

Tuan A. Le — Development of Data Acquisition Systems for Wind Tunnel
University of Notre Dame

Daniel Mark Avis — Wind Tunnel Velocity Profile Mapping
Oregon State University

Scott Kabat — Numerical Simulation and Dynamic Load Effects
University of Notre Dame

Joel G. Theodore — Modeling of Nanjing TV Tower
University of Notre Dame

Michael L. Herman — Dynamic Wind Load Simulator
Rice University

Tracy Kijewski — Development of Wind Loads Provision-in Codes & Standards
University of Notre Dame

Julie Yeasted — Natural Hazards Mitigation Strategies
University of Notre Dame

Alicia N. Rigili — Damping Estimation in Buildings
Colorado State University

Rik Vandermuelen — Bootstrapping in signal Processing
Notre Dame

Hugh J. Roberts — Full-Scale Data Analysis
Notre Dame

Kevin Bott — Web-based Data Management
Notre Dame

Megan McCullogh — Climate Change and Hurricanes

Notre Dame	
Emily Kunen Brown University	Social and Structural Risk Modeling of Tsunamis
Julie Martom Brown University	Reliability of Coastal Structures under Multi-Hazard Environment
Thomas Mueller Notre Dame	Software development for VORTEX-Winds
Sarah Bobby Notre Dame	Full-scale data management
Olga Beltsar Notre Dame	Damping Modeling
Lauar Duvel Notre Dame	CFD
Jena Stigliano Notre Dame	Multiple TMD
McKena Kovar Notre Dame	Climate Change

EXPERIENCE

Administration/Management/Organization

Member, ASCE Huber Prize Committee, 2008-

Chair, EMI/ASCE Awards Committee, 2007-2012

Chair, ASCE Committee for Society Wide Awards based on Journal Papers, 2005-2008

Member, Technical Activities Committee, ASCE, 2004-2007

Member, Structural Engineering Institute, TAD, ExCom, 2009-

Chair, Structural Engineering Institute, TAD, ExCom, 2012-

Member, Advisory Board, The 21st Century Center for Excellence on the Effects of Wind on Buildings and Urban Environment, Tokyo Polytechnic University, Tokyo, Japan, 2004-2009

Chair, Advisory Board, Engineering Mechanics Division, ASCE, 2007-2008.

Chair, Department of Civil Engineering and Geological Sciences, University of Notre Dame, 1999 - 2002.

Chair, Executive Committee of the Engineering Mechanics Division, ASCE, 2002-03

Member, Executive Committee of the Engineering Mechanics Division, ASCE, 1999 - 2005 .

Vice-Chair, Engineering Mechanics Division, ASCE, 2001-2002.

Internal reviewer, for the Department of Aerospace and Mechanical Engineering's academic review; joined by four leading external senior professors/deans/senior administrators, 1998.

External reviewer, for the Department of Civil Engineering, Duke University, 2004.

Chair, Chair Search Committee of the Department of Aerospace and Mechanical Engineering, University of Notre Dame, 1995.

Member, Dean Search Committee of the College of Engineering, University of Notre Dame, 1997-98.

Co-Chair, ASCE's Specialty Conference on Probabilistic Mechanics and Structural Reliability, Notre Dame, IN, 2000.

Chaired, ASCE's Specialty Conference, "Hurricane Alicia: One Year Later", 1984.

Chaired, AAWE's Workshop on Wind Engineering: Planning for the Future at NSF, Arlington, Virginia, 1996.

Chaired, Workshop on Planning for a National Wind Hazards Reduction Program at the Johns Hopkins University, 1997.

Chaired, The Sixth U.S. National Conference on Wind Engineering, University of Houston, 1989.

Chaired, Technical Program of the Seventh U.S. National Conference on Wind Engineering, University of California at Los Angeles, 1993.

Organized, NSF/NIST Workshop on Large Scale Testing, NSF, Arlington.

Chaired, ASCE's technical committee: Wind Effects/Dynamic Effects (1986-90); Task Committee on Damping Systems (1993-1997); Probabilistic Methods Committee (1998-2000).

Regional Chair, (North America & South America) International Association for Wind Engineering, 1994-99; to coordinate wind engineering research activities in North

America and South America with other international groups, i.e., Asia & Pacific, and European & African.

President, American Association for Wind Engineering 1994-98; represent wind research and practice communities at national and international activities, assist federal agencies in prioritizing research needs and interact with congressional staff; formulate and articulate a vision for the wind related research and development.

Member, Provost's Advisory Committee 1996-1999 and 2000-2003; Committee advises the Provost on matters related to academics, budgetary; governance and the university promotion and tenure decisions.

Chaired, Undergraduate Curriculum Committee and Honesty Committee, Department of Civil Engineering and Geological Sciences, University of Notre Dame, 1993-94, 1991-93, respectively.

Chaired, Faculty Annual Performance Evaluation Committee, Department of Civil Engineering, University of Houston, 1986-87.

Director, Structural Aerodynamics Ocean System Modeling Laboratory, University of Houston, 1984-1990; Laboratory consisted of a large size boundary layer type atmospheric wind tunnel and a wave tank for modeling ocean systems with state-of-the-art instrumentation.

AWARDS and HONORS

Awards

Appointed as National High-End Foreign Consultant to Bridge Engineering Department, Tongji University; The State Council, People's Republic of China, 2012-2015

Inducted Honorary Member of the Japan Association for Wind Engineering, 2012, for his contributions to the advances in wind engineering (First from the US, 3rd Int'l honorary member)

Conferred the status of Life Member of ASCE, 2012 for dedication to Civil Engineering profession and the critical role-played within ASCE

Inducted to the Offshore Technology Conference Hall of Fame, ASCE/COPRI, 2011, for his paper presented at early years of OTC that offered innovation, direction and lasting impact on the design, construction or installation of offshore infrastructure

Appointed Honorary Professor of Tongji University, Shanghai, PROC , 2010**,** for contributions to wind engineering, bridge engineering and structural engineering. He joins four leading international bridge engineers who received this honor in last 23 years.

Elected 2010 Distinguished Member of ASCE for his knowledge, eminence in the field of wind engineering, structural engineering, engineering mechanics, for profound contributions to the ASCE Wind Loads Standards and for development of web-based technologies and design tools for practice

2010 Foreign Fellow Indian National Academy of Engineering for contributions to the dynamics of structures and wind load effects

2009 Research Achievement Award, 9th Annual University of Notre Dame Research Achievement Award for outstanding contribution to research

2009 Member US National Academy of Engineering (NAE), for contributions to analyses and designs to account for wind effects on tall buildings, long span bridges, and other structures

2008 ASCE Civil Engineering State-of-the-Art Award for their paper entitled, "Validating Wind-induced Response of Tall Buildings: Synopsis of the Chicago Full-scale Monitoring Program," it was originally published in the October 2006 issue of the ASCE Journal of Structural Engineering.

2007 A. G. Davenport Medal, International Association for Wind Engineering Senior Research Award, inaugural recipient of the medal to be awarded quadrennially for fundamental contributions to quantification, modeling, simulation and analysis of wind load effects for structural design.

Advisory Professor, Tongji University, Shanghai, PROC, 2006-2010

Guest Professor, Tokyo Polytechnic University, Tokyo, Japan, 2009-present

2005 Robert H. Scanlan Medal, ASCE, medal awarded by the Engineering Mechanics Division of ASCE for outstanding contribution in engineering mechanics.

2003 Distinguished Service Appreciation as Chair of Executive Committee of the Engineering Mechanics Division of ASCE, Washington, D.C., 2003.

2002 Jack E. Cermak Medal, ASCE, inaugural recipient of the medal awarded jointly by the Engineering Mechanics Division and the Structural Engineering Institute for outstanding contributions to the effects of wind on structures.

1999 Munro Prize, Best paper in Engineering Structures, an International Journal of Wind, Waves and Earthquakes, Elsevier, during 1999, Vol. 22.

1998 Achievement in Academia Award, College of Engineering, Colorado State University.

1997 Engineering Award, National Hurricane Conference for contributions to the development of new ASCE7-95 Minimum Design Loads for Buildings and Other Structures which is leading to safer, more hurricane-resistant construction in many areas.

1997 American Association for Wind Engineering Award in appreciation for the many contributions to the development of the ASCE7-95 Wind Load Standard.

Presidential Young Investigator Award, 1984, the White House Office of Science and Technology Policy/National Science Foundation.

Halliburton Young Faculty Research Excellence Award, 1983, Cullen College of Engineering, University of Houston.

Martin Minta Award of the American Institute of Aeronautics and Astronautics, 1977.

Greaves Cotton & Co., UK, Gold Medal, 1968, for being the Best Civil Engineering Graduate.

Presidential Award, 1968, The Office of the President of Pakistan, awarded to the top graduates in Engineering/Science/Humanities.

Habib Bank Gold Medal for the Highest Standing in the Graduating Class of 1968 in Civil Engineering.

Habib Bank Gold Medal for the Highest Standing in Structural Engineering Area, 1968.

Pak-Techno Consultants Gold Medal for the Highest Standing in Hydraulics and Environmental Engineering Areas, 1968.

Finalist in Esquire Magazine's search for the Best of the New Generation Men & Women under Forty Who are Changing America, April 1984.

Finalist Rhodes Scholarship from Pakistan (two finalists), 1968.

Best All Round Scholar, 1962, Don Bosco High School, Lahore, Pakistan.

B.Sc. in Civil Engineering **With Distinction**, 1968.

Merit Scholarships

East West Center Scholarship (a Fulbright Hayes Program) for Graduate Studies at the University of Hawaii/MIT, 1971-73.

British Commonwealth Scholarship for Graduate Studies at the Imperial College of Science and Technology, University of London, London, England, 1971-74 (did not avail).

Asian Institute of Technology, Scholarship, Bangkok, for Graduate Studies, 1971-73 (did not avail).

Saigol Foundation Merit Scholarship in Engineering, 1964-68.

National Merit Scholarship, Department of Education, Government of Pakistan, Pre-Engineering and Engineering Studies, 1962-68.

Journal Editorships/Editorial Boards

Editor-in-Chief, North & South America, ***Wind and Structures, An International Journal***, Techno-Press, 1997-2005.

Associate Editor, ***Journal of Engineering Mechanics***, ASCE, 1998 - 2000.

Associate Editor, ***Journal of Structural Engineering***, ASCE, 1987 - 1997.

Guest Editor, ***Structural Safety***, special volume on the Reliability of Structures, 2001-02.

Guest Editor, ***Journal of Wind Engineering and Industrial Aerodynamics***, special volume no. 36, dedicated to the Sixth U.S. National Conference on Wind Engineering, 1990.

Member, ***Editorial Board of Probabilistic Engineering Mechanics***, Elsevier, 1994-.

Member, ***Editorial Board of Journal of Wind Engineering and Industrial Aerodynamics***, Elsevier, 1995-.

Member, Editorial Board of ***Structural Safety***, Elsevier, 1995-.

Member, International Editorial Board of ***Engineering Structures***, Elsevier, 1995-02; 2007-

Member, Editorial Board of ***Applied Ocean Research***, Elsevier, 1996-.

Member Editorial Board, ***STRIDES***, University of Houston Research Magazine, 1987-90.

Member Editorial Board, ***Natural Disaster Studies***, National Research Council, National Academy of Science/Engineering, National Academy Press, Washington, D.C., 1988-91.

Member Editorial Board, ***Computer-Aided Civil & Infrastructure Engineering***, 2009-

Member Editorial Board, ***Structure and Infrastructure Engineering*** 2007-;

Member Editorial Board, ***Int'l J. of Engrg. Under Uncertainty***, 2008-.

Member Editorial Board, ***Frontiers of Structural and Civil Engineering***, 2011-

National/International Appointments

Member, *NRC Committee on the Risk Assessment of Bio-Agro Defense Facility, 2011-2-12*

Member Advisory Board, *The 21st Century Center of Excellence: Wind Effects on Buildings and Urban Environment, Tokyo Polytechnic University, Tokyo,* 2003-2007.

Visiting Professor, *Department of Civil Engineering, Universiti Teknologi Malaysia,* August, 2003, Jan-Feb, 2005.

Regional Coordinator, *International Association for Wind Engineering (North America and South America),* 1995-2009.

President, *American Association for Wind Engineering,, 1994-98.*

Vice-Chair, *Engineering Mechanics Division, ASCE, 2001-2002.*

Chair, *Engineering Mechanics Division, ASCE, 2002-2003.*

Chair, *Structural Engineering Institute, TAD, ASCE, 2012-*

Member, *Board of Directors of the Multi-hazard Mitigation Council* an advisory body of the National Institute of Building Science, Washington, DC, 1998-1999.

Member, *Governing Council, The Partnership for Natural Disaster Reduction*, FEMA/ DOE/INEEL.

Member, *Blue Ribbon Review Committee of New ASCE Manual of Practice for Wind Tunnel Testing of Buildings and Structures*, ASCE, 1995.

Member, *Advisory Board, International Wind Engineering Forum*, 1994-.

Member, *Advisory Board, DOE/NASA,* Project on Aerospace Engineering at Southern University, LA, 1995-97.

Member, *Board of Directors, American Association for Wind Engineering,* 1992-2002.

Member *of the Panel to Review of the Need for a Large-Scale Test Facility for Research on the Effects of Extreme Winds on Structures*, National Research Council, National Academy of Sciences, 1998-99.

Member of the *Panel on the Assessment of Wind Engineering Issues in the United States*, National Research Council, National Academy of Sciences, 1989-91.

Consultant - UNDP *to the Government of India*, Engineering for Mitigation of Cyclone Damage, 1993-94, 1995.

***Member**, Committee on Natural Disasters*, National Research Council, National Academy of Sciences, 1986-91.

Who's Who Listings

Listed in **Who is Who in America**, 55th Edition, 2001-

Listed in **International Man of the Year**, 2000/2001-

Listed in **Who's Who in Science and Engineering**, 2000-

Listed in **2000 Outstanding Scientists of the 20th Century**.

Listed in **Who's Who in Society**, 1988-

Listed in **Who's Who in the South and Southwest**, 1983-

Listed in **International Who's Who in Engineering**, 1983-

Listed in **Who's Who in Engineering**, 1982-

Listed in **Who's Who in Technology Today**, 1980-

Listed in **American Men and Women of Science**, 1979-

Listed in the **Directory of World Researchers 1980's** - published by International Technical Information Institute, Japan.

SPONSORED RESEARCH

Global Center of Excellence: New Frontier of Education and Research in Wind Engineering, **Ministry of Education, Culture, Sports, Science and Technology (MEXT)**, 2008-2013

Cyber Eye: A Cyber-Collaboratory for National Risk Modeling and Assessment to Mitigate the Impacts of Hurricanes in a Changing Climate, **Strategic Research Initiative, University of Notre Dame, 2010-2013**

Real-Time Monitoring of Burj Khalifa Tower, **Samsung Corporation**, **Samsung Design and Construction Group, 2009-2010**

Advanced Aeroelastic Analysis Framework for Cable-Supported Bridges under Turbulent Winds, **National Science Foundation, 2009-20012.**

CDI-TYPEII: Open Sourcing the Design of Civil Infrastructure (OSD-CI), **National Science Foundation, USA, 2009-**

VORTEX-Winds, A Virtual Organization for Reducing the Toll of Extreme Winds on Society, **National Science Foundation**, 2007-2009

Structural Health Monitoring of Tall Buildings, **Samsung Corporation**, Samsung Design and Construction Group, 2007-2008

Performance Evaluation of Tall Buildings under Winds: From Predictive Methods to Laboratory and Full-Scale Measurements, **National Science Foundation,** 2006-2009

Performance of Glass/Cladding of High-Rise Buildings in Hurricane Katrina and its Impact on the Vertical Evaluation, **National Science Foundation,** 2005-2006.

Study of Load Effects on Structures Induced by Gust-Fronts, **National Science Foundation,** 2003-2006.

Characterization, Modeling and Simulation of Transient Hurricane Loads, **NIST/University of Florida**, 2003-2004.

Full-Scale Study of the Behavior of Tall Buildings Under Winds, **National Science Foundation**, 2000-2003.

Evolution of Time-Frequency Analysis: New Developments of Wavelet-Based Systems - Identification for Aero-Mechanical Systems, **NASA Indiana Space Grant Consortium**, 2000-2002.

Modeling of Directional Seas in Bay of Campeche, **Ocean Engineering Services**, CA, 1999-00.

Travel Grants/Fellowships, **National Institute of Industrial Safety**, **Ministry of Labor, Japan, University of Kyoto and Tokyo Polytechnic University, Japan and European Union**, **NSF,** 2000-07.

Research Participation in the 10th International Conference on Wind Engineering, **National Science Foundation**, 1999-00.

Wind & Building Pressure Field Data and Its Simulation in the Laboratory, (jointly with Clemson University & Texas Tech University) **Lockheed Martin**, 1998.

Wind Loading and Capacities of Components, Connections and Systems, (Jointly with Clemson University & Texas A&M University), **Lockheed Martin**, 1995-98.

The Next Generation of Tuned Liquid Dampers for Controlling Structural Motions, **National Science Foundation**, 1995- 98.

Engineering Research Equipment, Full Scale Component Testing and Digital Control System Upgrade, **National Science Foundation**, 1997-98.

Research Participation in the Twenty Ninth Joint Meeting of the U.S.-Japan Panel on Wind & Seismic Effects (UJNR), **National Science Foundation**, 1997-98.

REU Site in CE/GEOS at the University of Notre Dame, (S. Silliman, P.I., CE/GEOS Faculty Co-PI), **National Science Foundation**, 1997-2000.

Large Scale Test Facility, National **Science Foundation**, 1997-98.

Large Scale Test Facility, Center for Building Technology, **NIST**, 1997-98.

Dynamic Response of Structures, **National Science Foundation**, 1995-98.

US/PRC Joint Research Program in Structural Control: Control of Nanjing TV Tower, **National Science Foundation**, 1994-98.

Engineering for Wind Hazard Mitigation, **National Science Foundation**, 1995-98.

Response Statistics of Ocean Structures under Wind, Wave and Current Loads and Their Motion Control, **Office of Naval Research**, Mathematical Sciences Division, Department of Defense, 1993-1997.

Numerical Investigation of Wind Effects on Structures, Su3500, National Center for Supercomputing, **National Science Foundation**, 1996-97.

Bridge Aerodynamics, University of Notre Dame, 1996-97.

Travel Grants, **Lockheed-Martin, FEMA, CCIND, NSF, IBHS**, 1995-00.

Engineering Research Equipment: Data Acquisition, Sensing and Control, **National Science Foundation**, 1995-96.

International Travel Fellowship, **International Wind Engineering Forum** (Japan Society for Advancement in Building Science), 1994-98.

Research Participation in the Ninth International Conference on Wind Engineering, **National Science Foundation**, 1994-95.

Engineering of Structures for Mitigating Damage Due to Cyclones, **United Nations Development Project,** UN/Government of India, 1993-1995.

UJNR Panel Travel Support, **National Science Foundation** ,1993, 1999,2002, 2006

Dynamic Response of Structures, **National Science Foundation**, 1992-1993.

Offshore Winds and Their Load Effects, Offshore Technology Research Center, **National Science Foundation**, Engineering Research Centers Program, 1991-1992.

Equipment for Wind Tunnel Laboratory, **University of Notre Dame**, 1990-.

Response of Tension Leg Platform to Combined Action of Wind, Waves, and Currents, **Texas Advanced Research Program**, 1989-1991.

Mitigation of Offshore Platform Motions Utilizing Tuned Sloshing Dampers (A.N. Williams Co-PI), **Texas Advanced Technology Program**, 1989-92.

Wind Effects on Tension Leg Platforms, Offshore Technology Research Center, **National Science Foundation**, Engineering Research Centers Program, 1990-1991.

Faculty Development Award, **University of Houston**, Office of the Provost, 1989-1990.

Dynamic Response of Structures, **National Science Foundation**, 1990-1993.

Wind Resistant Design of High-Rise Buildings, **Building Research Institute**, Ministry of Interior, Taiwan, 1991.

Risk Assessment and Probabilistic Design, **University of Houston**, Energy Laboratory, 1989-1990.

Wind Effects on Tension Leg Platforms, Offshore Technology Research Center, **National Science Foundation**, Engineering Research Centers Program, 1989-1990.

Dynamic Response of Structures, **National Science Foundation**, 1989-1990.

Nonlinear Frequency - Domain Hydrodynamic Analysis of Compliant Offshore Platforms in Random Seas, **Texas Advanced Technology Program,** 1988-1990.

Dynamic Response of Structures, **National Science Foundation**, 1988-1989.

Sixth U.S. National Conference on Wind Engineering, **National Science Foundation,** 1988-1990.

Dynamic Response of Structures, **Halliburton Foundation**, Houston, Texas, 1988- 1989.

Seismic Analysis of Structure-Equipment Systems, **Amber/Booth Company**, Inc., Houston, Texas, 1986-1988.

Dynamic Response of Structures, **National Science Foundation**, 1986-1987.

Serviceability of Tall Buildings, **American Institute of Steel Construction**, Chicago, Illinois, 1985-1990.

Grant CPU time on the CRAY Y-MP, **CRAY Corporation**, Minneapolis, Minnesota, 1987-1988.

Equipment and Travel Grants, **Halliburton Foundation**, Houston, Texas, 1984- 1986.

Dynamics of Deepwater Compliant and Fixed Offshore Structures, **Shell Oil, Conoco, Brown & Root, DnV,** 1984-1991.

Dynamic Response of Structures, **National Science Foundation**, 1985-1986.

Response of Tension Leg Platforms to Random Wave and Wind Fields, **Chevron Oil Field Research Company**, La Habra, California, 1984-1986.

Participation in a Joint US-Australian Workshop on Loading, Analysis and Stability of Thin-Shell Bins, Tanks and Silos, Sydney, Australia, **National Science Foundation**, 1985-1986.

Development of Ultra-sensitive Force Balance and Automated Experimental Control, **New Research Opportunities Program**, University of Houston, 1984-1985.

Dynamic Response of Structures, **National Science Foundation**, 1984-1985.

Equipment Grant (Microcomputer System), **University of Houston**, 1983-1984.

International Travel Grant, **National Science Foundation**, 1983-1984.

Development of Computer Programs for Dynamic Analysis of Tension Leg Platforms, **Gulf Research & Development Company**, Houston, Texas, 1982-1983.

Wind Engineering Study of Kilroy Airport Center, **Kilroy Industries/AeroVironment**, Pasadena, California, 1981-1982.

Wind-Excited Response of a Tension Leg Platform, **Gulf Research & Development Company**, Houston, Texas, 1980-1982.

Across-Wind Response of Towers and Stacks of Circular Cross Section, **National Science Foundation**, 1980-1982.

Local Terrain Effects on Jet Engine Test Facility, **General Electric/AeroVironment**, Pasadena, California, 1979-1980.

Equipment for Wind Tunnel Laboratory, **New Research Opportunities Program**, University of Houston, 1979-1981.

PUBLICATION

Refereed Publications

Journal Articles

Wu, T. and Kareem, A., "Simulation of Nonlinear Bridge Aerodynamics: A Sparse Third-order Volterra Model", ***Journal of Sound and Vibration***, submitted 2012.

Wu, T. and Kareem, A., (2012), "Revisiting Convolution Scheme in Bridge Aerodynamics: A Comparison of Step and Impulse Response Functions". ***Journal of Engineering Mechanics***, ASCE, submitted 2012.

Wu, T. and Kareem, A., (2012), "A Nonlinear Convolution Scheme to Simulate Bridge Aerodynamics". ***Computers & Structures***, sumitted 2012

Kareem, A., and Wu, T., "Wind Induced Effects on Bluff Bodies in Turbulent Flows: Nonstationary, Non-Gaussian and Nonlinear Features". ***Journal of Wind Engineering and Industrial Aerodynamics,*** submitted 2012.

Wu, T., Kareem, A. and Li, S., "Excitation Mechanism of Rain-Wind Induced Vibration of Cables: Unsteady and Nonlinear Aspects". ***Journal of Wind Engineering and Industrial Aerodynamics***, submitted 2012.

Wu, T., and Kareem, A. , " Linear and nonlinear aeroelastic analysis frameworks for cable-supported bridges". ***Nonlinear Dynamics***, submitted 2012.

Thomas, J., Kareem, A., Bowyer, K., "Reliability of High Resolution Aerial Imagery for the Fine-Grained Post-Hurricane Damage Classification," submitted ***IEEE Transactions on Geoscience and remote Sensing***, Sept. 2012.

Thomas, J., Kareem, A., Bowyer, K., "Robust Registration of Aerial Imagery with Substantial Changes in the Urban Structures," submitted ***IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing (JSTARS)***, Sept. 2012.

Kwon, D-K, Kumar, D., Kareem, A., "Hardware-In-the-Loop Simulation of a Building with a Tuned Sloshing Damper," submitted, ***Journal of Structural Engineering,*** ASCE, Aug. 2012

Guo, Y. L. and Kareem, A., "System Identification Based on Nonstationary Data Using Blind Source Separation in Time-Frequency," to be submitted to the ***Journal of Engineering Mechanics,*** ASCE, Oct. 2012

Bernardini, E., Spence, S.M.J., Kareem, A., "A Probabilistic Approach for the Full Response Estimation of Tall Buildings with 3D modes using the HFBB," submitted to ***Structural Safety***, Oct. 2012

Zuo, L and Kareem, A., "Energy Harvesting and Motion Control of Tall Buildings using Power Generating Tuned Mass Dampers," submitted to ***International Journal of High-rise Buildings***, CTBUH, March 2013.

Wang, L., McCullough, M., Kareem, A., "Modeling and Simulation of Downburst Winds," ***Journal of Wind and Engineering and Industrial Aerodynamics***, Submitted, Sept, 2012

Wu, T. and Kareem, A., "Vortex-induced vibration of bridge decks: a Volterra series based model". ***Journal of Engineering Mechanics***, ASCE, accepted for publication, 2013.

Kwon, D-K, Kareem, A., "Comparative study of major international wind codes and standards for wind effects on tall buildings," ***Engineering Structures***, Elsevier**,** 51, 23-35, 2013.

Wang, L., McCullough, M., Kareem, A., "Modeling and Simulation of Non-stationary Processes Using Wavelet and Hilbert Transforms," ***Journal of Engineering Mechanics***, ASCE, accepted for publication, 2013.

Wu, T, and Kareem, A., "Bridge Aerodynamics and Aeroelasticity: A Comparison of Modeling Schemes," ***Fluids and Structures***, submitted, July 2012

Seymour, S. and Kareem, A., "Tall Buildings and Damping: A Concept-Based Data-Driven Model," ***Journal of Structural Engineering,*** ASCE, submitted, June 2012

Xu, Y., Hu, L., and Kareem, "A. Conditional Simulation of Non-Stationary Fluctuating Wind Speeds for Long-Span Bridges," ***Journal of Engineering Mechanics***, ASCE, accepted for publication, Sept, 2012

Kwon, D-K, Kareem, A., "Generalized Gust-front Factor: A Computational Framework for Wind Load Effects," ***Engineering Structures***, Elsevier, 48, 635-644, 2013.

Wu, T. and Kareem, A., 2012. "Aerodynamics and Aeroelasticity of Cable-Supported Bridges: Identification of Nonlinear Features," ***Journal of Engineering Mechanics***, ASCE, accepted for publication, 2012.

McCullough, M., Kwon, D.K., Wang, L., & Kareem, "Efficacy of Averaging Interval for Non-Stationary Winds," in press, ***Journal of Engineering Mechanics***, ASCE, 2013

Li, S. Y, Chen, Z. Q., Wu, T. and Kareem, A., "On the Rain Induced Vibration of Cables," ***Journal of Engineering Mechanics***, ASCE, accepted for publication, 2013

Kozmar, H, Butler, K. and Kareem, A., "Transient Aerodynamic loads on Vehicles Induced by Cross-Wind Bora Gusts," ***Journal of Wind and Engineering and Industrial Aerodynamics***, in press, 2013.

Kijewski-Correa, T., Kwon, D. K., Kareem, A., Bentz, A., Guo, Y. Bobby, S. Abdelrazaq, A., "SmartSync: An Integrated Real-Time Structural Health Monitoring and Structural Identification System for Tall Buildings," Invited paper for a special issue of ***Journal of Structural Engineering***, ASCE, In press, 2013

Chen, X., Kwon, D., Kareem, A., "High Frequency Force Balance Technique for Tall Buildings: A Critical Review and Some New Insights," Invited paper for a special issue of ***Wind and Structures***, Accepted for publication, 2012

McCullough, M., & Kareem, A., "Testing Stationarity with Wavelet Based Surrogates," ***Journal of Engineering Mechanics***, ASCE, in press, June, 2012

Yu, D., Butler, K., Kareem, A., "Simulation of the Influence of Aspect ratio on the Aerodynamics of Rectangular Prisms," ***Journal of Engineering Mechanics***, ASCE, in press, 2013.

Wu, T. and Kareem, A., "An overview of vortex-induced vibration (VIV) of bridge decks", ***Frontiers of Structural and Civil Engineering***, 2012, 6 (4): 335–347.

Bashor, R., Bobby, S., Kijewski-Correa, T., and Kareem, A., "Full-scale performance evaluation of tall buildings under wind," ***Journal of Wind and Engineering and Industrial Aerodynamics***, , 104-106, 2012, 88-97.

Li, L., Xiao, Y., Kareem, A., and Song, L., "A Comparative Study of Wind Characteristics in Typhoons and Hurricanes Using Field Observations." ***Journal of Wind and Engineering and Industrial Aerodynamics***, 104-106, 565-576, 2012.

Kwon, D. K., Kareem, A., Butler, K., "Gust-Front Loading Effects on Wind Turbine Tower Systems," ***Journal of Wind and Engineering and Industrial Aerodynamics***, 104-106, 2012, 109-115.

Guo, Y. L., Kareem, A., Ni, Y. Q., and Liao, W. Y., "Performance Evaluation of Canton Tower under Winds based on Full-Scale Data," ***Journal of Wind and Engineering and Industrial Aerodynamics***, 104-106, 2012, 116-128.

Kwon, D., Kareem, A., "Peak Factor for Non-Gaussian Load Effects Revisited," ***Journal of Structural Engineering,*** ASCE, 137(12), 1611-1619, 2011

Carassale, L. and Kareem, A. (2010), "Modeling Nonlinear Systems by Volterra Series", ***Journal of Engineering Mechanics***, *ASCE*, 136 (6), June 2010, 801-818.

Kareem, A, "Bluff Body Aerodynamics and aeroelasticity: A Wind Effects Perspective," ***Journal of Wind and Engineering and Industrial Aerodynamics***, Vol. 7 (1), January 2010, 30-74

K. Butler, S. Cao, Y. Tamura, A. Kareem, S. Ozono Characteristics of surface pressures on prisms immersed in a transient gust front flow field, ***Journal of Wind Engineering and Industrial Aerodynamics***, v. 98, n. 6-7, 2010 299-316.

Hwang, J-S, Kareem, A. and Kim, W-J, "Estimation of Modal Loads using Structural Response," ***Journal of Sound and Vibration***, 326 (3-5), 2009, 522-539.

Haan, Jr., F. L. and Kareem, A., **"**Anatomy of Turbulence Effects on the Aerodynamics of an Oscillating Prism," ***Journal of Engineering Mechanics***, *ASCE*, 135 (9), 2009, 987-999.

Kwon, Dae-Kun and Kareem, A., "Gust-Front Factor: A New Framework for Wind Load Effects on Structures," ***Journal of Structural Engineering, ASCE***, 135 (6), 717-732, 2009.

Kareem, A., "Numerical Simulation of Wind Effects: A Probabilistic Perspective," ***Journal of Wind Engineering and Industrial Aerodynamics***, 96 (10-11), 2008, 1472-1497.

Kwon, Dae-Kun, Kijewski-Correa, T. and Kareem, A., "e-Analysis of High-Rise Buildings Subjected to Wind Loads," ***Journal of Structural Engineering, ASCE***, 133 (7), 2008, 1139-1153.

Chen X. and Kareem, A., "Identification of Critical Structural Modes and Flutter Derivatives for Predicting Coupled Bridge Flutter," ***Journal of Wind Engineering and Industrial Aerodynamics***, 96 (10-11), 2008, 1856-1870.

Yalla, S. and Kareem, A., "Dynamic Load Simulator: Actuation Strategies & Applications," ***Journal of Engineering Mechanics***, ASCE, 133(8), 2007.

Simiu, E., Vickery, P. and Kareem, A., "Relationship Between Saffir-Simpson Hurricane Scale Wind Speeds and Peak 3- Sec Gust Speeds Over Open Terrain," ***Journal of Structural Engineering, ASCE***, 133(7), 2007.

Kijewski-Correa, T. and Kareem, A., "Nonlinear Signal Analysis: A Time-Frequency Perspective," ***Journal of Engineering Mechanics***, ASCE, 133(2), 2007, 238-245.

Chen, X. and Kareem, A., "Revisiting Multi-mode Coupled Bridge Flutter: Some new Insights," ***Journal of Engineering Mechanics***, ASCE, 132(10), 2006, 1115-1123.

Chen X. and Kareem, A., "Closure: Equivalent Static Wind Loads on Buildings: New Model" ***Journal of Structural Engineering***, 132(6), 2006, 1007-1008.

Kijewski-Correa, T., Kilpatrick, J., Kareem, A., Kwon, D.K., Bashor, R., Kochly, M., Young, B.S., Abdelrazaq, A., Galsworthy, J., Isyumov, N., Morrish, D., Sinn, R.C. and

Baker, W.F. (2005), "Validating the Wind-Induced Response of Tall Buildings: A Synopsis of the Chicago Full-Scale Monitoring Program," ***Journal of Structural Engineering***, ASCE, 132(10), 2006, 1509-1523.

Kijewski-Correa, T., Kareem, A. and Kochly, M. "Experimental Verification and Full-Scale Deployment of Global Positioning Systems to Monitor the Dynamic Response of Tall Buildings," ***Journal of Structural Engineering***, ASCE, 132(8), 2006, 1242-1253.

Kijewski, T. and Kareem, A, "Efficacy of Hilbert and Wavelet Transforms for Time-Frequency Analysis," ***Journal of Engineering Mechanics***, ASCE 132(10), 2006, 1037-1049.

Chen, X. and Kareem, A., "Dynamic Wind Effects on Buildings with 3-D Coupled Modes: Application of HFFB Measurements," ***Journal of Engineering Mechanics***, ASCE, Vol. 131, No. 11, 2005.

Chen, X. and Kareem, A., "POD Based Modeling, Analysis and Simulation of Dynamic Wind Loads," ***Journal of Engineering Mechanics***, ASCE, Vol. 131, No. 4, 2005, pp. 325-339.

Chen, X. and Kareem, A., "Coupled Dynamic Analysis and Equivalent Static Wind Loads on Buildings with 3-D Modes," ***Journal of Structural Engineering***, ASCE, Vol. 131, No. 7, 2005 pp. 1071-1082.

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Kareem, A., and Hsieh, J., "Reliability Analysis of Concrete Chimneys Under Winds," Dept. of Civil Engineering, University of Houston, Technical Report No. UHCE 83-4, prepared for National Science Foundation, May, 1983.

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"Carma Center Wind Tunnel Testing Pressure and Wind Environment," collaborated with NHC Wind Engineering Inc., in the preparation of this report for McKinley Architects, Seattle, Washington, 1981.

"Wind Engineering Study of Kilroy Airport Center," collaborated with Aerovironment, Inc., in the preparation of this report for Kilroy Industries, California, 1981.

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UJNR/Panel on Wind & Seismic Effects, Task Committee E Workshop, Seattle, 2-5 October, 2002.

UJNR/Panel on Wind & Seismic Effects, Task Committee E Workshop, Tsukuba, Japan, May 24-28, 1999.

International Workshop on "CFD for Wind Climate in Cities" - How to Apply CFD to Practical Problems in Environment, Buildings and Structures, August 24-26, 1998, Hayama, Japan.

U.S.-Japan Joint Workshop/Seminar on Cooperative Research in Structural Control for Civil Infrastructure Systems, Kyoto, Japan, June 28-July, 1998.

U.S.-Japan and China Workshop on Civil Infrastructure Systems and Hazard Mitigation, Shanghai, Nov. 4-8, 1998.

Workshop on the National Wind Hazard Mitigation Program, American Association for Wind Engineering/NSF, The Johns Hopkins University, Baltimore, December 7-8, 1997.

Workshop on Large Scale Testing for Winds, NSF/NIST, Alexandria, VA, May 1-2, 1997.

Workshop on Experimental Facilities for Extreme Winds, Lockheed Martin, Idaho Falls, Nov. 23-25, 1995.

Workshop on Wind Engineering: Planning for the Future, American Association for Wind Engineering/NSF, Arlington, VA, Nov. 6, 1995.

1995 ONR Workshop-Reliability of Nonlinear Ocean Structures Under Stochastic Excitation, ONR Probability and Statistics Program, Arlington, Virginia, July, 1995.

Workshop on Missiles in a Wind Field, Insurance Institute for Property Loss Reduction, Washington, D.C., February 10-11, 1995.

Workshop on Engineering of Structures for Mitigating Damage Due to Cyclones, United Nations Development Program, Structural Engineering Research Centre, Madras, India, January 4-6, 1995.

National Institute of Standards and Technology Workshop on Research Needs in Wind Engineering, Gaithersburg, MD, September, 1994.

1994 ONR Workshop-Reliability of Nonlinear Ocean Structures Under Stochastic Excitation, ONR Probability and Statistics Program, Arlington, Virginia, July, 1994.

Workshop on Strategies for Design and Construction of Structures to Mitigate Damage Due to Cyclones, United Nations Development Program, Structural Engineering Research Centre, Madras, India, January, 1994.

International Workshop on the Assessment and Prequalification of Offshore Production Structures, New Orleans, Louisiana, December, 1993.

1993 ONR Workshop-Reliability of Nonlinear Ocean Structures Under Stochastic Excitation, ONR Probability and Statistics Program, Arlington, Virginia, July, 1993.

Industry Workshop-Hydrodynamics of Offshore Structures, College Station, sponsored by Offshore Technology Research Center/NSF, February, 1992.

International Workshop on Technology for Hong Kong's Infrastructure Development, Hong Kong, sponsored by NSF, Croucher Foundation, HK General Chamber, Hong Kong Institution of Engineers, December, 1991.

Wind Resistant Design of High-Rise Buildings, Taipei, sponsored by Building Research Institute, Ministry of Interior, Taiwan, August, 1991.

Industry Workshop-Hydrodynamics of Offshore Structures, College Station, sponsored by Offshore Technology Research Center, NSF, February, 1991.

Offshore Winds & Their Effects, Houston, Texas, sponsored by Offshore Technology Research Center, NSF, July, 1990.

Kareem, A., "Wind Engineering at Notre Dame," NIST Workshop on Research Needs in Wind Engineering, Gaithersburg, MD, September, 1994.

Kareem, A., "Reduction of Natural Disasters," First Pan-American Congress on Prevention and Control of Disasters," XXI Convention UPADI 90, Washington, D.C., 1990.

Kareem, A., "Offshore Winds and Their Effects on Platforms," Workshop on Offshore Winds and Their Effects on Platforms, Offshore Technology Research Center, Houston, Texas, 1990.

Kareem, A., "Stochastic Response of Structures to Environmental Loads," NMHM-NSF-PYI Panel, Washington, D.C., 1989.

Sun, Wei-Joe, and Kareem, A., "Coupled Lateral-Torsional Response of Multi-Degree-of-Freedom System to Nonstationary Random Excitation," AIAA (Houston Chapter) Meeting, NASA, Johnson Space Center, Houston, Texas, 1988.

Kareem, A., "Reliability Analysis of Structures Under Dynamic Wind Loading," Spring Convention, ASCE, 1986, Seattle.

Kareem, A., "Effects of Hurricane Alicia on Galveston-Houston Area," Hurricane Awareness 1984, Institute of Storm Research, Houston, Texas, June 6-8, 1984.

Kareem, A., "Overview of Damage in Hurricane Alicia," ASCE Annual Convention, Houston, Texas, Oct. 17-21, 1983.

Kareem, A. and Marshall, R.,, "Description of Hurricane Alicia," ASCE Annual Convention, Houston, Texas, Oct. 17-21, 1983.

Kareem, A., "Simulation of Dynamic Wind Loads with Applications to Offshore Structures," Structures Congress 82, Fall Convention, New Orleans, October 25-29, 1982.

Kareem, A., and Hsieh, J., "Reliability of Concrete Chimneys Under Winds," Symposium on Reliability of Structures, ASCE Fall Convention, New Orleans, October 25-29, 1982.

Kareem, A., "Simulation of Wind Loads on Curtain Walls," Texas Section, ASCE Fall Meeting, October 4-6, 1979, College Station, Texas.

INVITED SEMINARS

Assessing Structural Damage through Post-Disaster Surveillance: From Ground Level Observations to Aerial Imagery, Mehta-McDonald Lecture Series, Feb 13, 2013.

Natural and Supplementary Damping in Structures, 7th Annual Center for Extreme Load Effects on Structures Seminar Virginia Polytechnic Institute and State University Blacksburg, Nov. 30th 2012

Analysis Simulation and Design of Structures under Winds: a Cyberinfrastructure Perspective**,** Richardson Lecture, Department of Civil Engineering, University of Colorado, April 20, 2012.

Cyberinfrastructure based Analysis Simulation and Design of Structures under Winds**,** Department of Civil Engineering, Rensselaer Polytechnic Institute, April 11, 2012

Wind Effects on the Built Environment, the ETH, Swiss Federal Institute of Technology, Zurich;

Dynamic Wind Load Effects: The Next Frontiers, Department of Civil Engineering Seminar, University of Illinois, Urbana, Champagne, March 28, 2011

Wind Effects on Structures: The Next Frontiers, UB-EERI, MCEER and CSEE-GSA Seminar, University of Buffalo, October, 2010

Recent Advances in Wind Load Effects on Structures, Tongji Honorary Professorship Lecture, Tongji University, Shanghai, October, 2010.

Dynamic Load Effects on Structures, Distinguished Lecture Series, Department of Civil Engineering, Duke University, Durham, N.C., March 2010.

The Audacity of Change: A Transition to the Non-Stationary and Non-Linear Era, Distinguished Lecture, Hong Kong, Polytechnic University, Hong Kong, January 2010.

Tailoring Contemporary Structures for Dynamic Load Effects, Lichtenstein Distinguished Seminar, Department of Civil Engineering, Ohio State University, November, 2009

The Audacity of Change: A Transition to the Nonlinear and Non-Stationary Era, Global Center of Excellence Seminar, Tokyo Polytechnic University, Atsugi, Japan, Septmeber 2009

The Saga of Glass Damage in Urban Environments Continues: Consequences of Aerodynamics and Debris Impact, Global Center of Excellence Seminar, Tokyo Polytechnic University, Atsugi, Japan, September 2009

Tailoring Contemporary Structures for Dynamic Load Effects, Ferguson Distinguished Lecture, Department fo Civil Engineering, The University of Texas, March, 2009

Tailoring Contemporary Structures for Dynamic Load Effects, Department fo Civil and Environmental Engineering, Rice University, October 20, 2008

Tailoring Contemporary Structures for Dynamic Wind Load Effects, Department of Civil Engineering, University of Arizona,, April 28, 2008.

Dynamic Load Effects on Structures, Podwell Distinguished Lecture, City University of New York, NY, November, 2007

The Wind Load Effects: The Next Frontiers, Lecture at the Investiture Ceremony of the Advisory Lectureship at Tongji University, Bridge Engineering Department, Tongji University, Shanghai, October, 2006

Equivalent Static Loads on Structures, The 21st Century Center for Excellence on the Effects of Wind on Buildings and Urban Environment, Tokyo Polytechnic University, Tokyo, Japan, March 11, 2005.

Aerodynamic Tailoring of Tall Buildings, Sekolah Pendidikan Professional Dan Pendidikan Berterusan (SPACE), Universiti Teknologi Malaysia, Kuala Lumpur, February 23-24, 2005

Wind Effects on Structures: The Next Frontiers, The 21st Century Center for Excellence on the Wind Effects on Buildings and Urban Environment, Tokyo Polytechnic University, Tokyo, Japan, November 15, 2003.

Dynamics of Flexible Structures: The Next Frontiers, Department of Civil Engineering, Universiti Teknologi Malaysia, August 12, 2003.

Recent Advances in the Modeling of Tall Buildings Under Winds, Department of Civil Engineering, Universiti Teknologi Malaysia, August 18, 2003.

Dynamic Response of Structures: Computational Methods to Laboratory Experiments and Full-Scale Monitoring, CPP, Wind Engineering Consultants, Fort Collins Colorado, April 31, 2003

Next Frontiers in Dynamic Response of Structures, Department of Civil Engineering, Colorado State University, Fort Collins, Colorado, May 1, 2003.

Dynamic Response of Structures: Computational Methods to Laboratory Experiments and Full-Scale Monitoring, Georgia Tech, March 25, 2003.

Probabilistic Dynamic Response of Structures: Computational Tools, Laboratory and Full-Scale Experiments, Vanderbilt University, January 23, 2003.

Dynamic Response of Structures: Computational Methods to Laboratory Experiments and Full-Scale Monitoring, University of California, Irvine, California, November 22, 2002

Recent Developments in Wind Effects on Structures, RWDI Wind Engineering Consultants, Guelph, Canada, May 20, 2002.

Probabilistic Dynamics of Longspan Bridges and Tall Buildings: The Next Frontiers, the Department of Civil Engineering, Hong Kong Polytecnique University, Hong Kong, April 19, 2002.

Dynamics of Tall Buildings and Long-Span Bridges, Ove Arup Consulting Engineers, Hong Kong, April 18, 2002

Jousting with the Wind: A Structural Engineer's Nightmare, National Institute of Industrial Safety, Ministry of Labor, Tokyo, March 17, 2000.

Modeling and Simulation of Wind Effects: A Reflection on the Past and Outlook for the Future, Tokyo Institute of Polytechnics, Tokyo, March 14, 2000.

Modeling of Dynamic Wind Effects on Structures, Department of Civil Engineering, University of California at Berkeley, October 25, 1999.

"Dynamic Load Effects on Structures," Joint Seminar in Mechanics and the Environment, Duke University, Interdisciplinary Colloquia, Department of Civil and Environmental Engineering and the Center for Applied Control at Duke University, May 4, 1999.

"Wind Effects on Civil Infrastructure," Drexel Intelligent Infrastructure and Transportation Safety Institute, Drexel University, Philadelphia, Pennsylvania, December 11, 1998.

"Dynamic Wind Effects on Structures," CROM Lectures in Civil Engineering Design 1998, Department of Civil Engineering, University of Florida, Gainesville, Florida, October 15, 1998.

"Probabilistic Dynamic Analysis of Structures Under Environmental Loads," Department of Civil Engineering, Vanderbilt University, Nashville, Tennessee, July 14, 1998.

"Modeling Analysis and Simulation of Dynamic Load Effects on Structures," Joint Seminar of the Departments of Civil Engineering and Aeronautics and Astronautics, University of Illinois, Urbana Champaign, Illinois, September 26, 1997.

"Dynamics of Structures Under Environmental Loads," Department of Civil Engineering, Illinois Institute of Technology, Chicago, Illinois, October 17, 1997.

"Dynamics of Tall Buildings Under Winds," Department of Civil Engineering, Cornell University, Ithaca, NY, October 29, 1996.

"Contemporary Analysis and Simulation Tools in Wind Engineering," Department of Civil Engineering, Tokyo University, Tokyo, Japan, September, 1995.

"Dynamic Response of Structures Under Environmental Loads," Dept. of Civil Engineering, Johns Hopkins University, Baltimore, Maryland, April, 1995.

"Probabilistic Dynamic Response of Structures," Dept. of Civil Engineering, Washington University, St. Louis, Missouri, September, 1994.

"Damping Devices to Control Structural Motions," Tokyo Institute of Polytechnics, Tokyo, March, 1994.

"Aerodynamics of Tall Buildings," Kanagawa University, Yokohama, Japan, March 1994.

"Stochastic Environmental Loads on Structures," Structural Engineering Research Center, Madras, India, December, 1993.

"Wind Tunnel Modeling of Structure," Structural Engineering Research Center, Madras, India, December 1993.

"Dynamic Response Analysis of Structures," Structural Engineering Research Center, Madras, India, January 1994.

"Jousting with Environmental Loads: A Structural Engineer's Nightmare," Department of Civil Engineering and Geological Sciences, University of Notre Dame, September, 1992.

"Wind Tunnel Modeling of Structures," Tamkang University, Taipei, Republic of China, August 1991.

"Codification of Wind Loads," National Taiwan University, Taipei, Taiwan, August 1991.

"Fluctuating Pressures and Forces on Bluff Bodies," Institute of Industrial Sciences, University of Tokyo, March, 1990.

"Wind and Wave Loadings on Tension Leg Platforms," Chevron Oil Field Research Company, California, July, 1990.

"Stochastic Analysis of Tension Leg Platforms," Energy Laboratory Seminar Series, Houston, Texas, April, 1990.

"Dynamics of Tension Leg Platforms," Shell Development Company, Bellaire Research Center, Bellaire, Texas, April, 1989.

"Stochastic Response of Tension Leg Platform to Wind and Wave Fields," Production Research Department, Marine Group, Conoco, Inc., Ponca City, Oklahoma, October, 1987.

"Stochastic Response of Offshore Platforms," Department of Mathematics, University of Houston, April, 1987.

"Performance of Constructed Facilities Under Extreme Winds," Department of Civil Engineering Seminar, University of Houston, December, 1986.

"Environmental Loading of Offshore Platforms," Shell Development Company, Bellaire Research Center, Bellaire, Texas, July, 1985.

"Wind Loads on Offshore Platforms," Brown and Root, Inc., Houston, Texas, June 1985.

"Computer-Aided Design of Structures," Pakistan Railways, Structural Engineering Division and Computerization Institute, Lahore, Pakistan, December 1984.

"Hurricane Alicia: Wind Field Characteristics," American Meteorological Society, Houston, March, 1984.

"Effects of Hurricane Alicia in the Galveston-Houston Region of Texas," Fluid Mechanics and Wind Engineering Program Seminar Series, Department of Civil Engineering, Colorado State University, November, 1983.

"Wind Field Characteristics Over the Ocean and Wind Load Effects on Offshore Installation," Gulf Research & Development Company, Houston, Texas, June 1983.

"Wind Engineering Study of Buildings A Designer's Viewpoint," Bernard Johnson, Inc., Houston, Texas, January, 1983.

"Nonlinear Dynamic Response of Compliant Offshore Structures," Structural Engineering Seminar, Rice University, Houston, Texas, November, 1982.

"Probabilistic Structural Dynamics with Applications to Environmental Loads," Structural Engineering Seminar, University of Colorado, February, 1982.

"Environmental Loads on Structures with Applications to Structural Dynamics," Structural Engineering Seminar, Texas A & M University, February, 1982.

"Dynamic Effects of Wind on Offshore Structures," Chevron Oil Field Research Company, U.S.A., September, 1981.

"Wind Loads on Gulf Oil TLP," Gulf Research & Development Company, Houston, Texas, May 1981.

"Dynamics of Tall Buildings," Dept. of Civil Engineering, Georgia Tech., Atlanta, July, 1979.

"Wind Excited Response of Tall Buildings," Dept. of Civil Engineering, University of Houston, Houston, March, 1978.

SERVICE ACTIVITIES

UNIVERSITY SERVICE

A. Departmental

Faculty Co-Advisor, ASCE Student Chapter (UH) 1979-1980

Undergraduate Advisor (UH) 1985-1986

Member, Planning Committee (UH) 1986-1988
Chairman 1987-88

Member Department, Faculty Evaluation Committee Chairman 1986-87 (UH)	1985-1987
Member, Committee on Appointments and Promotions (UH)	1984-1990
Professor-in-Charge, CE Computer Laboratory (UH)	1986-1990
Member, Committee on Appointments & Promotions (ND)	1993-1996
Member, Department Graduate Curricula & Program Committee (ND)	1991-1993
Chairman, Undergraduate Curriculum Committee (ND)	1993-1994
Member, Department Graduate Recruiting Committee (ND)	1991-1993
Chairman, Department Honesty Committee (ND)	1991-1993
Member, Department Research Laboratories Committee (ND)	1991-1995
Member, Department Space Renovation Committee (ND)	1991-1995
Member, Department Ad Hoc Committee on Governance (ND)	1996-97
Member, Civil Engrg. & Geo. Sciences Chair Search (ND)	1998-99

B. College

Member, College Executive Committee (ND)	1999-02
Member, Dean Search Committee (ND)	1997-98
Member, Review Team for 10-Year Evaluation of the Department of Aerospace & Mechanical Engineering	1997-1998
Chairman, Chair Search Committee for Department Mechanical and Aerospace Engineering (ND)	1995
Member, College Committee on Women (ND)	1996-
Alternate Member, College Council (ND)	1995-1996
Member, College Recruiting Committee (UH)	1979-1985
Member, College Governance Committee (UH)	1979-1985

Member, Petroleum Engineering Committee (UH)	1982-1983
Member, Committee to Study Remote Instruction by Television (UH)	1983-1985
Member, College Graduate Standards Committee (UH)	1985-1987
Member, College Computer Policy Committee (UH)	1986-1990
Member, College CIE Microcomputer Committee (UH)	1986-1990
Served as an inter-departmental member on a number of theses/dissertation committees (UH and ND)	1978-

C. University

Chair Provost's Ad hoc Committee on the National Academy Of Engineering Membership	2009-
Member Provost's Task Force on Strategic Directions in Science & Engineering (ND)	1999
Member Provost's Advisory Committee (ND)	1996-1999 2000-2003
Member Provost's Ad Hoc Committee on Fellowships (ND)	1993-1994

D. Inter-University

Advisor to the Department of Civil Engineering, University of Puerto Rico in the development of their Wind Tunnel Laboratory Facilities, August 1982. Served as an external Ph.D. thesis examiner to the University of Sydney, Sydney, Australia, Washington University, St. Louis, Missouri, National University of Singapore, Singapore, Hong Kong Polytechnic University, IIT Madras, and University of Western Ontario, London, Canada. Review of Graduate program at Duke University, IGERT Program at TTU

2.PROFESSIONAL SERVICE

National Science Foundation, Research Proposal Reviewer and Review Panel Member, January 1981-present, (USA), National Science & Engineering Research Council (Canada), University Grants Commission (Australia) and Hong Kong Research Grants Council, Hong Kong Polytechnic University, IIT Madras

Paper Reviewer, Journals of Structural Engineering, ASCE, Journal of Engineering Mechanics, ASCE, Journal of Aerospace Engineering, ASCE, Journal of Computations, ASCE, Journal of Harbors & Waterways, ASCE, Journal of Offshore Mechanics and Arctic

Engineering, ASME, Journal of Applied Mechanics, ASME, Journal of Vibration and Acoustics, ASME, Journal of Fluids Engineering, ASME, Journal of Energy Resources, ASME, Engineering Structures, Journal of Wind Engineering and Industrial Aerodynamics, Probabilistic Engineering Mechanics, Structural Safety, Structural Engineering and Mechanics, International Journal of Solids and Structures, AISC Engineering Journal, Journal of Sound and Vibration, Journal of the Japan Society of Wind Engineering, AIAA Journal, Fluids and Structures, ASCE Technical Publications, John Wiley Science Publications, Journal America Meteorological Society, and Wind & Structures, IEEE Signal Processing, IEEE Transactions

Reviewer for the City of Houston's Building Code for Wind Loading, 1980-90.
Reviewer for the Municipality of Dubai, Code for Wind Loading, 2009
Member, Construction Industry Council's Code Review Committee, 1983-85.

Professional and Honor Societies

American Society of Civil Engineers
American Institute of Aeronautics and Astronautics
Scientific Research Society of North America, SIGMA XI
Honor Society of PHI KAPPA PHI
Honor Society of Chi Epsilon
American Association for Wind Engineering, USA
International Association for Civil Engineering Reliability and Risk Analysis
Earthquake Engineering Research Institute, USA
Japan Association for Wind Engineering
International Wind Engineering Forum

Technical Committee Memberships

Member, Committee to Review the Need for a Large-Scale Facility for Research on the Effects of Extreme Winds on Structures, National Research Council, National Academy of Sciences.

Member, Task Committee E on Design for Wind and Wind Hazard Mitigation, U.S.-Japan Cooperative Program in Natural Resources (UJNR), Panel on Wind & Seismic Effects.

Member, Committee on Natural Disasters, National Research Council, National Academy of Sciences, 1986 - 91.

Chairman, Committee on Wind Effects/STD - Dynamic Effects, American Society of Civil Engineers, 1986 - 90, member 1979.

Member, Dynamic Effects, Administrative Committee, Structural Division, ASCE, 1986 - 90.

Member, Probabilistic Methods Committee, Engineering Mechanics Division, ASCE, 1987 - .

Chairman, Probabilistic Methods Committee, Engineering Mechanics, Division, ASCE, 1999-2000.

Member, Dynamics Committee, Engineering Mechanics Division, ASCE, 1985- 95.

Member, Experimental Analysis and Instrumentation, Engineering Mechanics Division, ASCE, 1993-.

Member, Aerodynamics Committee, Aerospace Div., ASCE, 1986 - .

Member, Committee on Structural Identification and Health Monitoring of Constructed Facilities, Structural Division, ASCE, 1999 - .

Member, Committee on Tall Buildings, Structures Division, ASCE, 1999 - .

Member, Task Committee on Wind Damage Investigation, Aerospace Division, ASCE, 1989 - .

Member, Task Committee on Turbulence, Engineering Mechanics Division ASCE, 1981-86.

Chairman, Task Committee on Damping Systems, Structures Division, ASCE, 1993-.

Member, ASCE 7 (formerly ANSI) Task Committee on Wind Loads, 1991-.

Chairman, Sub-Committee on Application of Wind Engineering to Offshore Engineering, Structures Division, ASCE, 1989 - .

Member, Task Committee on Building Motion, Perception and Criteria, Structures Division, ASCE, 1989 - 95.

Member, Criteria and Loading (CL) subcommittee, Wind Loading and Wind Effects, Council on Tall Buildings and Urban Habitat, 1985 - .

Member (corresponding), Society of Naval Architects and Marine Engineers, Offshore Committee, Panel OC-1, Stability and Motions, 1988 - .

Member, IASSAR, Stochastic Methods in Structural Mechanics, 1989 - .

Member, Wind Damage Mitigation Committee, Insurance Institute for Property Loss Reduction, Boston, 1995-.

Member, Engineering Committee, National Hurricane Conference, Tallahassee, Florida, 1995-.

Consulting Activities

ExxonMobil, Houston Texas, Floating, Production, Storage and Offloading Vessels.

Chevron Oil Field Research Company, La Habra, CA. - Offshore Structures.

Aerovironment, Inc., Pasadena, CA., General Consultant - Wind Energy Systems and Structural Aerodynamics.

Herzfeld & Rubin, New York, N.Y. - Automobile Aerodynamics.

The Reinforced Earth Company, Arlington, VA. - Structural Aerodynamics.

Bernard Johnson, Inc., Houston, TX. - Structural Dynamics.

Walter P. Moore and Associates, Inc., Houston, TX. - Structural Dynamics.

Reynolds, Allen & Cook, Houston, TX. - Cladding Behavior of Tall Buildings.

Applied Research Engineering Services, Inc., Raleigh, N.C. - Wind Engineering, Earthquake Engineering, and Structural Dynamics.

United Nations Development Program, Madras, India - Engineering of Structures for Mitigating Damage Due to Cyclones.

Impact Forecasting, L.L.C., Chicago, Illinois – Risk Assessment of Structures in Wind Storms and Earthquakes.

KPFF Consulting Engineers, Seattle, Washington – Design of Olive & Eight a 420 ft tall building in Seattle and Olivian a 400 ft tall building in Seattle..

State Farm Insurance, Damage evaluation of coastal communities in the wake of Katrina.

MacNamara Consulting, Design of Tuned Sloshing Dampers

Jones Day, Attorneys at Law, Stability of a Scissor Lift