



American Association
for Wind Engineering

AMERICAN ASSOCIATION FOR WIND ENGINEERING
www.aawe.org

THE WIND ENGINEER

Bogusz (Bo) Bienkiewicz, Editor

March 2001

Special Points of

Interest:

- ? Program Finalized for Americas Conference on Wind Engineering—2001
- ? Software available for Lateral Load Design of Wood Structures
- ? Sudden death of Prof. Hatsuo Ishizaki saddens wind engineering community
- ? Presidents Message
- ? Invitation to contribute suggestions for and invitation to AAWE Board meeting to be held prior to ACWE—2001 Conference
- ? Request for ideas for the Wind Engineering Newsletter and to advance wind engineering

Inside this issue:

Americas Conference on Wind Engineering—2001	1—6
Woodworks Software	7
Presidents Message	8
Prof. Hatsuo Ishizaki	8
Request for Input to AAWE Board	8
AAWE Membership Application and Renewal Form	9
From the Editor	11
Wind Engineering and Related Conferences—Jan.	11
AAWE Contact Information	12

Americas Conference on Wind Engineering—2001

To be Held at Clemson University

June 3-6, 2001

This ninth Conference was formerly named the U. S. National Conference on Wind Engineering

Plan to attend the Americas Conference on Wind Engineering – 2001

The Americas Conference on Wind Engineering – 2001 will be held at the Conference Center and Inn at Clemson University during the period from June 3-6, 2001. This Conference is the ninth in a series of conferences sponsored by AAWE and were previously named the U. S. National Conference on Wind Engineering. A copy of the Conference Program and additional details have been available on the AAWE web page at (www.aawe.org). All technical sessions and meals will be held at the Conference Center. A very attractive registration package has been arranged that includes all meals from Sunday evening through lunch on Wednesday. Registration before May 1 is \$360.00 for regular registration and \$160.00 for students. Registration after May 1 will be \$390.00 for regular registration and \$190.00 for students. A special membership fee of \$30.00 for regular membership and \$10.00 for students will be offered for persons signing up for membership in the American Association for Wind Engineering for the first time. Please download and return the Excel-based registration form, which can be accessed at (<http://www.aawe.org>) or (<http://www.ce.clemson.edu/acwe>)

Special arrangements have been made for hotel rooms at the Martin Inn that is directly connected to the Conference Center and at the nearby Ramada Inn. Room rates at the Martin

Inn are on the order of \$95.00 per night and on the order of \$75.00 per night at the Ramada Inn. There are many other Motels close to Clemson University and some of these are listed on the AAWE web pages..

The phone number for the Martin Center is (864) 654-9020 and the number for the Ramada Inn is (864) 654-7501. The conference will provide transportation from the Ramada Inn to the Conference Center.

All meeting rooms will be equipped with a computer projection system, 35 mm slide projector, transparency projector, VCR and a laser pointer.

For further information contact Prof. Scott Schiff at Clemson University, scott.schiff@ces.clemson.edu or (864) 656-0456.

CONFERENCE PROGRAM

Sunday, June 3rd

9:00 to 11:00 am Golf Tournament (Starting Tee Times) at the [Walker Golf Course](#)

4:00 to 6:00 pm Tour of the Clemson University Wind Load Test Facility

6:00 to 9:00 pm Registration and Reception at the [Madren Conference Center](#)

Monday, June 4th

8:00 to 8:30 am Registration & Continental Breakfast

8:30 to 8:45 am Conference Welcome

8:45 to 10:00 am Invited Presentations

10:00 to 10:30 am Coffee Break

10:30 to 12:15 pm Technical Sessions M1A, M1B and M1C

12:15 to 1:15 pm Lunch

1:15 to 3:00 pm Technical Sessions M2A, M2B and M2C

3:00 to 3:30 pm Break

3:30 to 5:15 pm Technical Sessions M3A, M3B and M3C

6:00 to 7:00 pm Reception (Cash Bar)

7:00 to 8:30 pm Dinner

8:30 to 10:00 pm Pavilion (Cash Bar)

Tuesday, June 5th

7:45 to 8:15 am Breakfast and Registration

8:15 to 10:00 am Technical Sessions T1A, T1B and T1C

10:00 to 10:30 am Coffee Break

10:30 to 12:30 pm Technical Sessions T2A, T2B and T2C

12:30 to 1:30 pm Lunch

1:30 to 3:30 pm Technical Sessions T3A, T3B and

T3C

3:30 to 4:00 pm Refreshment Break

4:00 to 5:00 pm Break-out Discussions (Topics to be determined)

6:00 to 7:00 pm Reception (Cash Bar)

7:00 to 8:30 pm Banquet

8:30 to 10:00 pm Pavilion (Cash Bar)

Wednesday, June 6th

8:00 to 8:30 am Breakfast and Registration

8:30 to 10:00 am Technical Sessions W1A, W1B and W1C

10:00 to 10:30 am Coffee Break

10:30 to 12:15 pm Technical Sessions W2A, W2B and W2C

12:15 to 1:15 pm Lunch

1:15 to 3:00 pm Technical Sessions W3A, W3B and W3C

3:00 pm Conference Adjournment

Technical Sessions M1A, M1B and M1C

Session M1A Windstorm Vulnerability I	Session M1B Wind Characteristics & Climatology I	Session M1C Flexible Structures I
Contribution to the Vulnerability Analysis and Evaluation of the Urban Structural Elements Exposed to Hurricanes: Methodology and Comparative Study in three growing Caribbean Metropolitan Centers <i>By G. Bonfanti</i>	Wind Profile Parameters in a Low-Rise Single-Family Residential Community <i>By A Gardner, C. Letchford, K. Mehta</i>	On the effectiveness of passive mass dampers to control wind vibrations <i>By M. Montanaro, R. Ambrosini, R. Danesi</i>
Regional Variability in Vulnerability of Buildings Due to Hurricanes <i>By A. Khanduri</i>	Modeling and Analysis of Topographic Wind Effects and Hurricane Damage for Hawaii and Guam <i>By G. Chock, L. Cochran</i>	Effect of a Non-Linear Tuned Mass Damper on the Across Wind Response of a Slender Tower <i>By R. Gerges, B. Vickery</i>
Damage Documentation Database <i>By R. Carter, K. Mehta</i>	Physical Modeling and Numerical Simulation of Wind Flow over Complex Terrain <i>By K. Kwok, P. Hitchcock, J. Chim</i>	Effect of a Tuned Mass Damper on Wind-Induced Vibrations: Dealing with a Rectangular Cylinder with an Aspect Ratio of 6 <i>By J. Garrett</i>
Forecasting Changes in Exposure to Hurricane Risk in Coastal Regions in the US <i>By M. Rivera, R. Davidson</i>	Design Wind Speeds in Hong Kong - Typhoon York <i>By E. Ho, M. Pande, M. Mikitiuk, G. Kopp, D. Surry</i>	Aerodynamic Response of High-Rise Buildings with Tuned Mass Dampers Considering Soil-Structure Interaction Effect <i>By M-Y.Liu, W-L. Chiang, J-H. Hwang, C-R. Chu</i>
Developing a Strategy for Rapid Visual Screening of Buildings for Wind Vulnerability <i>By M. Gaus, D. Liang, M. Bontea</i>	A Comparison of Wind Prediction Models for Transitional Flow Regimes using Full-Scale Data in Lubbock, Texas <i>By C. Letchford, A. Gardner, K. Mehta</i>	Design and Performance of a Class of Non-Linear Tuned Mass Dampers <i>By J. Galsworthy, B. Vickery</i>

Technical Sessions M2A, M2B and M2C

Session M2A Windstorm Vulnerability II	Session M2B Field Studies	Session M2C Flexible Structures II
Rapid Assessment of Economic Losses Due To Hurricanes - Hurricane Loss Potential Scale For The U.S. <i>By A. Khanduri, S. Gunturi</i>	Full-Scale Testing of Manufactured Homes in Naturally Occurring High Winds <i>By W. Richins, T. Larson, S. Snow, R. Schmidt, J. Goodman</i>	Gust Effect Factors for Highway Tall Luminaries <i>By K. Mehta, Y. Al-Menyawi</i>
Simulated and Actual Property Insurance Loss Analysis in Historical Hurricanes <i>By R. Song, V. Saxena, J. Yin</i>	Overall Wind Loads on a Low-Rise Building Measured in the Field <i>By R. Fagan, D. Smith</i>	Wind Action on Transmission Towers <i>By A. Loredou-Souza, A. Davenport</i>
Comparative Assessment of the Hurricane Disaster Risk of Coastal Counties in the U.S. <i>By R. Davidson, K. Lambert</i>	Field Measurements of Surface Pressures in High Winds <i>By M. Porterfield, N. Jones</i>	A New Model for an Old Problem - The Dynamic Mechanism of Collapse of Transmission Line Towers Under Wind Forces <i>By R. Rodrigues, R. Battista, M. Pfeil</i>
A Fuzzy Model for Wind Damage to Single Family Dwellings <i>By A. Kumar, J. Duniyak</i>	Wall pressures near the corner of low-rise building <i>By D. Smith, M. Martinez</i>	Experimental study of the wind forces on free-standing latticed telecommunication towers <i>By C. Carril, N. Isyumov, R. Brasil</i>
Hurricane Wind Damage Simulation Using GIS <i>By C. Fernandez, C. Letchford, K. Mehta</i>	A Wireless Data Acquisition System for Coastal Wind Monitoring <i>By C. Subramanian, J-P. Pinelli, L. Buist, T. Reinhold</i>	Optimal Dynamic Control for TLP Type Off-shore Platform Under Sea/Wind Conditions <i>By R. Alves, R. Battiste</i>

Technical Sessions M3A, M3B and M3C

Session M3A Windstorm Vulnerability III	Session M3B Wind Characteristics & Climatology II	Session M3C Data Analysis & Simulation
Public Attitudes Toward Window Protection for Hurricanes <i>By J. Baker</i>	When the Ground Truth Hurts: An Analysis of Forecast, Measured, and reported Wind Conditions in Hurricane Floyd <i>By P. Sparks</i>	A Data Visualization and Analysis Program for an Instrumented Coastal House <i>By J-P. Pinelli, C. Subramanian, T. Kumar, T. Reinhold, K. Gurley</i>
An Application of Fuzzy Logic to Explain Hurricane Evacuation Behavior <i>By T. Tiglioglu, R. Brown, J. Kruse</i>	Tropical Storm Track Prediction Using Autoregressive Time Series Analysis <i>By D. Banks, J. Peterka</i>	Wind Load Simulation: A New Algorithm and Comparative Study <i>By F. Masters, K. Gurley</i>
The Case for Formal Engineering of Residential Buildings <i>By J. Minor</i>	Maximum Wind Speeds Over North America <i>By J. Sanchez-Sesma</i>	Numerical and Physical Simulation of Thunderstorm Downdraft Winds and Their Effects on Buildings <i>By A. Sengupta, P. Sarkar, G. Rajagopalan</i>
Hurricane Bertha and Unemployment: A Case Study of Wilmington, NC <i>By B. Ewing, J. Kruse</i>	Engineering Implications of New Information on Boundary Layer Profiles in Hurricanes <i>By M. Powell, T. Reinhold, P. Vickery</i>	Prediction of Local Wind Pressures from Wind Tunnel Studies Using Time History Analysis <i>By R. Miltenburg, M. Cicci, M. Accardo, S. Gamble</i>
Performance of Electric Power Distribution Systems in the Carolinas in Recent Hurricanes <i>By I. Sarpong, R. Davidson, P. Sparks, D. Rosowsky, B. Shaik</i>	Climatology of High Wind Events in the United States 1960-1995 <i>By S. Weinbeck, C. Letchford, R. Peterson</i>	Locally Stationary Spectral Modeling of Wind Fields <i>By J. Duniyak</i>

Technical Sessions T1A, T1B and T1C

Session T1A Building Capacity & Mitigation I	Session T1B Wind Loads, Codes & Standards	Session T1C Wind Characteristics and Climatology III
Evaluating the Economic Viability of Strengthening New and Existing Residential Construction <i>By M. Stewart, D. Rosowsky, Z. Huang</i>	The Dominican Republic Wind Load Standards <i>By D. Comarazamy, J. Diaz</i>	Wind series correction due to sheltering caused by upwind obstacles near a meteorological station <i>By V. Duranona, J. Cataldo</i>
Reducing Wind Damage to Buildings Through Selective Mitigation Measures <i>By D. Perry, N. Stubbs</i>	Wind Load Codification for Low-Rise Buildings <i>By L. St. Pierre, G. Kopp, D. Surry</i>	Hurricane Wind Characteristics from Data Collected during the Wind Engineering Mobile Instrumented Tower Experiment <i>By R. Howard, J. Schroeder</i>
Status of Development of the HAZUS Wind Loss Estimation Model <i>By J. Minor, Philip Schneider</i>	Computer-Based Wind Design of Low-Rise Buildings: Peak Estimation of Non-Gaussian Wind Effects <i>By F. Sadek, E. Simiu</i>	Application of the Self-Determined Probability-Weighted Moment Method to Extreme Wind Speed Estimation <i>By T. Whalen, G. Savage, G. Jeong</i>
	Interpolating Wind-Induced Pressure on Low Buildings Using Artificial Neural Networks <i>By Y. Chen, G. Kopp, D. Surry</i>	Similarity Investigation of Turbulent Boundary Layers at Very High Reynolds Number <i>By H. Hangan, L. Castillo, G. Johansson</i>
The Vulnerability of Fully Glazed High Rise Buildings in Tropical Cyclones <i>By B. Lee</i>	Updated Regional Gust Wind Velocities and Recommendations for Structural Design in the Mexico City Valley <i>A. Lopez, J. Sanchez-Sesma, C. Black</i>	Design and Interactive Training, Simulation of Permanent Magnet, Toroidal Generator for Wind Application in Vietnam <i>By L. Tien, N. Thuy, T. Ky, R. Hanitsch</i>

Technical Sessions T2A, T2B and T2C

Session T2A Building Capacity & Mitigation II	Session T2B Wind Loads on Low-Rise Buildings I	Session T2C Computational Fluid Dynamics
Reserve Strength and Failure Wind Speed for Unreinforced Masonry Walls <i>By Y. Al-Menyawi, K. Mehta</i>	Effects of Roof Pitch on Low Rise Buildings Structural Loads <i>By C. Mans, G. Kopp, D. Surry</i>	The Effect of Boundary Layer Thickness on the Onset of Vortex Shedding from a Square Cylinder Near a Wall <i>By A. Straatman, R. Martinuzzi</i>
Design of Roof Sheathing Connections to Resist Uplift and Shear <i>By E. Sutt, T. Reinhold</i>	Wind-Induced Internal Pressures in Low-Rise Buildings <i>By T. Khim, P. Case, N. Isyumov</i>	Aeroelastic Analysis of Flow around a Rectangular Cylinder on Parallel Computing <i>By R. Selvam, Y. Jung</i>
Dynamic Analysis of Semi-Rigid Frames Subjected to Wind Pressures <i>By M. Filho, M. Guimaraes, C. Sahlit, J. Brito</i>	The Effect of the Surroundings With Different Separation Distances on Surface Pressures on Low-Rise Buildings <i>By C-H. Chang, R. Meronev</i>	An unstructured mesh approach for computing the flow around a 6m cube in the atmospheric boundary layer. <i>By N. Wright, A. Quinn, T. Yang</i>
Performance of Old Aircraft Hangars Subject to Modern Code Wind Loading <i>By G. Al-Chaar, D. Randolph, G. Lamb</i>	Wind Action On A Double-Curvature Covering <i>By O. Canavesio, M. Natalini, F. Rastellini</i>	P-Adaptive Finite Element Method for Aerodynamic Forces of Circular Cylinders in Wind <i>By R Selvam, Z. Ou</i>
Development of an Economic-Based Decision Framework to Guide Retrofit and Design Decisions for Low-Rise Residential Buildings Under Extreme Wind Events <i>By D. Liang, M. Gaus</i>	Wind Pressure Coefficients of Conical Roofs on Grain Bins <i>By H. Kebeli, R. Bucklin, K. Gurley, T. Reinhold</i>	Results for flow of the atmospheric boundary layer over a smooth hill using unstructured computational grids <i>By N. Wright, P. Stangroom</i>
Cost Savings in Building Envelope Renovation Using Wind Tunnel Studies <i>By D. Prevatt</i>	Pressure Measurements on a Building Model in a Simulated Downburst Flow <i>By M. Chay, C. Letchford</i>	Computer Simulation and Open-Channel Experimental Study of Gusty Vortex-Shedding Characteristics of Orographic Wind <i>By A. Eraslan</i>

Technical Sessions T3A, T3B and T3C

Session T3A Building Capacity & Mitigation III	Session T3B Wind Loads on Low-Rise Buildings II	Session T3C Flexible Structures III
Improved Reliability, Models for Low-Rise, Buildings Under , Extreme Wind Loads <i>By D. Liang, M. Gaus</i>	Wind Tunnel Modeling of Arched Canopy Roofs <i>By M. Natalini, O. Canavesio, B. Natalini, M. Paluch</i>	The Torsional Response of Tall and Intermediate Height Buildings Under Wind Action <i>By P. Case, N. Isyumov</i>
Database-Assisted Estimates of Ultimate Capacities of Low-Rise Building Frames Under Wind Loads <i>By S. Jang, L-W. Lu, E. Simiu</i>	Spatial Characteristics of Pressure Coefficients on Low Rise Gable Roof Structures <i>By A. Cope, K. Gurley</i>	Performance Based Nonlinear Analysis of Buildings Subjected to Extreme Wind Loads <i>By A Jain, G. Hart</i>
The Structural behavior of Cylindrical Silos under Wind Loads <i>By L. Andrade, C. Calil</i>	A Device to Mitigate Vortex Induced Rooftop Suction <i>By D. Banks, R. Meroney, P. Sarkar, F. Wu</i>	Continued Development of the Interference Index by Comparing Neural Network Analysis Data to Case Study Data <i>By E. English</i>
New Approaches for Retrofit of Low-Rise Buildings to Reduce Wind-Loss Vulnerability <i>By M. Gaus, D. Liang, M. Bontea</i>	Wind Action on Canopies Attached to Arch-Roofed Industrial Buildings <i>By M. Paluch, A. Loredo-Souza</i>	Prediction of Wind-Induced Building Responses in Time Domain <i>By J. Xie</i>
Development of the first phase of a static/non-static structural-loading facility for wind/seismic component testing <i>By R. Osborne</i>	Wind Loads on Open Canopy Structures <i>By D. Altman, T. Reinhold</i>	Wind Loading on Chimneys with Surface Mounted Appurtenances <i>By J. Galsworthy, B. Vickery</i>
The Impact of Wind-Tunnel Model Scale on Estimates of Wind Effects <i>By M. Riley, E. Simiu</i>	Development of a Prototype Tornado Simulator for the Assessment of Fluid-Structure Interaction <i>By D. James, C. Letchford, R. Peterson, J. Snow</i>	Vortex flow around a bluff body <i>By J. Cataldo, C. Farell</i>

Technical Sessions W1A, W1B and W1C

Session W1A Hazard Mitigation and Education	Session W1B Wind Loads on Low-Rise Buildings III	Session W1C Bridges
Restructuring a Structural Engineering Program Specific to Needs of the Building Envelope Professional <i>By D. Prevatt</i>	Turbulence, Quasi-Steady Theory, and Peak Pressures under Rooftop Vortices <i>By D. Banks, R. Meroney</i>	Investigation of Cable-Deck Interaction Using Full-Scale Measurements on a Cable-Stayed Bridge <i>By E. Ozkan, J. Main, N. Jones</i>
The 113 Calhoun St. Project: Making Homes More Resistant to Flood, Wind and Earthquake <i>By E. Judge, R. Bacon, S. Schiff</i>	Wind Tunnel Tests on Arch-Roof Structures <i>By A. Wittwer, M. De Bortoli, A. Loredo-Souza, M. Paluch, M. Natalini</i>	Field Measurements of Cable-Stay Vibrations <i>By S. Phelan, T. Gardner, K. Mehta, P. Sarkar</i>
Internet Opportunities to Achieve Wind Hazard Mitigation <i>By M. Gaus, D. Liang</i>	Wind Loads on Parapets <i>By C. Mans, G. Kopp, D. Surry</i>	Simultaneous characterization of wake velocity field, pressure, loading, displacement, and acceleration for a dynamic bridge deck model. <i>By H. Hangan, J. Kim, F. Ricciardelli, J. King</i>
Wind Hazard Game for Adults and High School Students to Enhance Learning About Wind Hazards <i>By M. Gaus, D. Liang, B. Zhao, M. Bontea</i>	Roof Parapets: Is Wind Load A Problem? <i>By T. Stathopoulos, P. Saathoff</i>	Determination of Bridge Deck Aerodynamic Derivatives from Indicial Functions <i>By A. Larsen</i>

Technical Sessions W2A, W2B and W2C

Session W2A Tornadoes and Tornado Protection	Session W2B Wind Loads on Low-Rise Buildings IV	Session W2C Aerodynamics for Slender Structures
Wind Pressure on Storm Shelters According to FEMA 361 and ASCE 7-98 <i>By Y. Al-Menyawi, R. Carter, E. Kiesling, K. Mehta</i>	A Wind-Tunnel Study of a Cubic Rooftop AC Unit on a Low Building <i>By N. Hosoya, J. Cermack, C. Steele</i>	Simulating Vortex Shedding Around Bluff Bodies <i>By P. de Sampaio, A. Coutinho, P. Hallak, M. Pfeil</i>
Tornado Activity and Design Loads for High Hazardous Facilities in Brazil <i>By F. deBarros, A. Landesmann</i>	Influence of Canopies on the Wind Actions on Arch-Roof Industrial Buildings <i>By M. Paluch, A. Loredou-Souza</i>	Aeroelastic analysis of bridges using FEM and moving grids <i>By R. Selvam, S. Govindaswamy</i>
Design Concepts for Sheltering from Extreme Winds <i>By B. Coulbourne, E. Tezak, T. McAllister</i>	CFD Estimation of Wind Loading on a Low-Rise Building in the Turbulent Boundary Layer <i>By T. Tamura, K. Nozawa</i>	Modal Selection Criteria in Reduced Mathematical Models for the Aeroelastic Analysis of Cable-Stayed and Suspension Bridges <i>By J. Di Nicolo, J. Andre, I. Ramos</i>
Wind Tunnel Test of the Stability of Vehicles in Severe Winds <i>By T. Schmidlin, B. Hammer, Y. Ono, P. King, L. Miller, G. Thumann</i>	Wind Effects in Structural Wood Members of Roof Truss According to the Brazilian Standard <i>By M. Demarzo</i>	Prediction of Aerodynamic Derivatives of Rectangular Cross Sections by the k-e model <i>By K. Shimada, T. Ishihara</i>
Retrofit Ideas for Creating Stronger Rooms in Wood Frame Houses <i>By T. Reinhold, S. Schiff, D. Rosowsky, B. Sill</i>	Identify Conical Vortices on Low-Rise Buildings Using a Projection Pursuit Approach <i>X. Gilliam, F. Wu</i>	Physical Interpretation and Simulation of Wind Pressures on Structures Through Frequency Filtering <i>By N. Cosentino, G. Bartoli</i>

Technical Sessions W3A, W3B and W3C

Session W3A Tornadoes, Tornado Protection and Convective Weather	Session W3B Wind Characteristics and Climatology IV	Session W3C Flexible Structures IV
Lessons Learned from the Massive May 3-4, 1999 Oklahoma/Kansas Tornado Outbreak <i>By J. Golden</i>	Microclimate Considerations for Building Design and Urban Planning <i>By H. Wu, M. Carter, M. Ratcliff, J. Slusarczyk</i>	Vortex Induced Vibrations of Reinforced Concrete Telecommunications Tower <i>By M. Paluch, A. Loredou-Souza, M. Rocha, G. Nunez</i>
The Oklahoma City Tornado Outbreak: A Wind Damage-Economic Loss Interface <i>By M. Thompson, J. Kruse, D. Smith, R. Peterson, E. Shaw, K. Simmons</i>	Wind comfort study and proposals of solutions for the Montevidea World Trade Center <i>By J. Cataldo, V. Duranona</i>	Along-Wind Response of a Reinforced Concrete Telecommunications Tower <i>By A. Loredou-Souza, M. Rocha, M. Paluch, G. Nunez</i>
Radar-Derived Analysis of the 3 May 1999 Oklahoma City Tornado and Comparison to Damage Estimates <i>By E. Shaw, R. Peterson, J. Kruse, K. Simmons, D. Smith, M. Thompson</i>	Using Computational Wind Engineering to analyze pedestrian level wind environments in a complex of buildings. <i>By N. Wright, T. Yang, G. Palmer, B. Vazquez, D. Harreaves</i>	Nonlinear Cable Response Due to 3-D Quasi-Static Wind-Induced Forces <i>By C. Vallabhan, T. Kewaisy</i>
Climatology of Tornadoes and Severe Thunderstorm Winds in the United States <i>By H. Brooks, C. Doswell, M. Kay</i>	A Study on Wind Power in Jamaica <i>By D. Amarakoon, A. Chen</i>	Dynamic Analysis of Cable Structures of Nonlinear Behavior Under Random Wind Excitation <i>By W. Leite, M. Franco, R. Brasil</i>
Development and Implementation of Integrated Field Observations during Convective Weather at Texas Tech University <i>By S. Weinbeck, A. Doggett, G. Skwira, M. Conder, R. Peterson</i>	Estimation of the Wind Power Potential on the Northwestern Coastal Area of Taiwan <i>By B-S. Shiau</i>	Numerical Analysis of the Dynamic Behavior of Suspended Cables Under Wind Loading <i>By L. Azevedo, M. Rocha, A. Loredou-Souza</i>

The following article presents information on a computer program that has great potential for contributing to the design of wood buildings that can have greatly improved wind and seismic resistance. This should be of great interest to the wind engineering community.



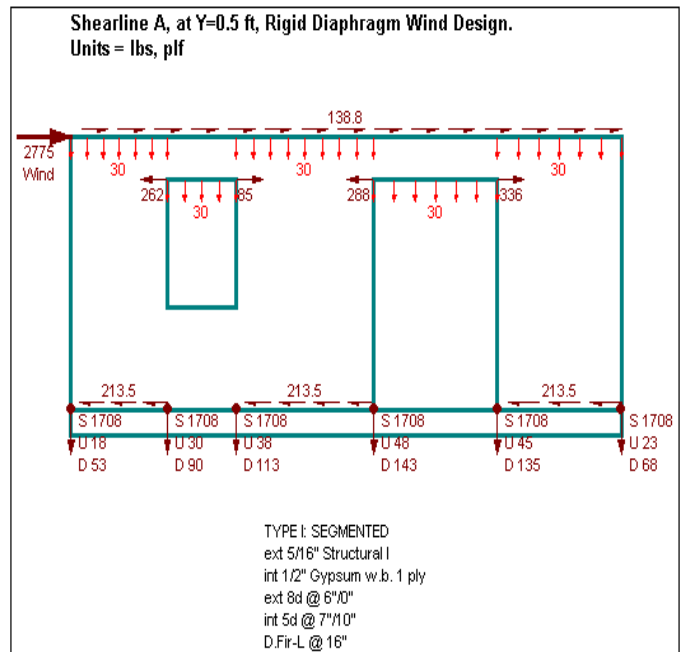
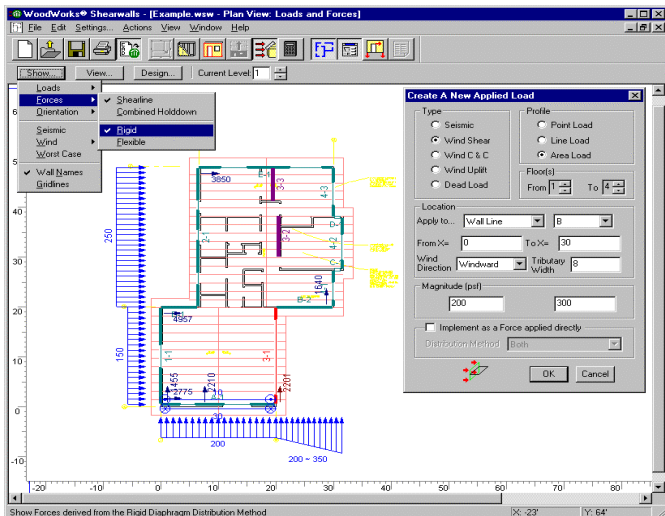
WoodWorks? Shearwalls

WoodWorks? Design Office is a suite of wood design software for sizing all types of wood and wood product members, for the design of wind and seismic loads on buildings, and for connection design. WoodWorks? includes three design programs, Sizer, Shearwalls and Connections, two design applets, an electronic version of the most recent National Design Specification? (NDS?). WoodWorks? is endorsed by the American Wood Council / AF&PA.

The most recent efforts of WoodWorks? have been focused advancing the Shearwalls program to provide engineers with a tool to aid in the design of low-rise wood structures for lateral loads. Specifically regarding wind loads, Shearwalls allows designers to lay-out an entire building up to four stories. This is done in plan view per floor where the user can enter the building geometry and shearwall locations graphically or by co-ordinates. The user has the option of importing a CAD .wmf drawing file (CAD can export these types of files) to use as a background image to help in placing shearwalls and in specifying the buildings configuration. The user now specifies the materials (sheathing, nailing, blocking, panel direction and framing species) to be used for different shearwalls. Sheathing can be specified on both sides of a shearwall for an increased resistance. The sheathing thickness, field and edge nail spacing can be left as unknown and the program will suggest the minimum requirements to meet the loads. The user can also specify things like the U.S. model building to design to, the maximum plan and elevation offsets for shearwalls to be considered as part of the same shearline, and maximum shearwall aspect ratios.

Next the user specifies the location and size of window and door openings along the shearwalls. The user can specify shearwalls as either being Type I (traditional or segmented) shearwalls or the new Type II (perforated) shearwalls. Perforated shearwalls can be advantageous in certain situations as they only require hold-downs at the end of shearwalls and not necessarily around all openings. The trade-off is larger hold-down forces and the requirement for a stiffer shearwall.

The user now begins to apply MWFRS area, point, trapezoidal and line wind loads to all levels of the building exterior (windward and leeward walls), and C&C, uplift and dead loads on shearwalls. Then the design button is pressed and the program distributes all lateral loads to the shearlines according to the flexible or rigid diaphragm analysis method. For rigid analysis, the program determines the center of load (and adjusts this by ±5% of the building width) and the center of rigidity of the shearwalls, and balances these two to distribute the loads to the shearwalls. The rigidity of orthogonal walls are also considered for rigid analysis. The program then designs all shearwalls (and groups them into walls having the same design), specifies hold-down forces, specifies dragstrut forces and designs the sheathing for C&C loads. The shearline load distribution can be viewed graphically and



adjusted manually, and hold-down locations and forces can be viewed in the elevation view by shearline.

The next stage in development for Shearwalls will see the addition of a wind and seismic load generating engine, based on ASCE A7-98 for wind, that will automatically generate wind pressures and resultant diaphragm loads based on the building shape, roof geometry, building code and site conditions. For more information on WoodWorks? or to download a working demo version, visit www.woodworks-software.com or contact WoodWorks? at 1-800-844-1275.

Prof. Hatsu Ishizaki

We received the sad news that Prof. Hatsu Ishizaki, a long time Professor at the Disaster Prevention Institute of Kyoto University, passed away suddenly on March 24, 2001 from a heart attack. Prof. Ishizaki was instrumental in building strong relationships between American and Japanese wind researchers. He was an organizer and participant in the First U.S.-Japan Joint Research Seminar on Wind Forces on Structures held in 1970 at the University of Hawaii at Manoa. This was followed by a second Seminar held in Kyoto in 1974. In the following years Dr. Ishizaki was active in contributing to and participating in many other joint U.S.-Japan activities. He was very active in creating and promoting new knowledge on wind engineering in Japan. Although no longer with us, he will live on through the many contributions he made to wind engineering and his efforts to understand ways to develop wind resistant construction that provides safety to the public. Messages of condolence can be sent to: Mrs. Fumiko Ishizaki, 286 Byakugouji, Nara 630-8302, Japan.

Presidents' Message

The year 2000 turned out to be a fairly quiet year for the U.S. with respect to Hurricanes although there were a number of Tornadoes and extreme wind events that left paths of destruction and resulted in loss of life. In December 2000 a wide scale tornado event killed twelve persons in Alabama and destroyed or severely damaged several hundred homes. On Feb. 25, 2001 a series of tornadoes struck Mississippi and Arkansas also destroying hundreds of homes and businesses and killing more than eight persons. Mississippi and Arkansas currently rank as #1 and #2 in deaths per capita due to tornadoes. It is almost like playing an old record over and over but the most discouraging thing is that we have not fully explored these full scale tests of nature in order to improve our scientific-technical knowledge regarding the more detailed aspects of wind loadings and structural resistance and to investigate whether we could in fact develop cost effective means to retrofit selected existing structures as well as provide improved safety and resistance in new construction. There is very little support currently being furnished for wind engineering research that has in the past provided the basis for improvements in specifying wind loads and required resistances. An even more discouraging picture seems to be a lack of support for research work at most of the experimental facilities, such as boundary layer wind tunnels, that have

provided the input upon which present improved loading standards have been developed. The situation is even more bleak for structural research. If the situation does not improve we are in danger of having some of the unique facilities that have been so productive in the past simply shut down and dismantled. There is still much we need to learn and these facilities are of key importance in making future progress. The centers where wind engineering research has been carried out also play an important role in educating students knowledgeable in wind engineering and in sustaining a trained cadre of experts who will be our key to future advancements. Letters to your congressional representatives and to key agencies could be of great value in highlighting the need to maintain the basic experimental facilities and to continue and expand other wind engineering research programs.

I am looking forward to the Conference to be held June 3-6, 2001 at Clemson University. Although the process of establishing a final program has taken a long time, this issue of the Wind Engineer is intended to bring the Conference organization to the attention of our AAWE members in a convenient form. I hope to see many of you at the Conference..

AAWE Board of Directors Meeting

There will be a meeting of the Board of Directors of the American Association for Wind Engineering on Sunday, June 3, 2001 from 12:00 noon until 4:00 PM preceding the Americas Conference on Wind Engineering-2001, that will be held at Clemson University in Clemson, South Carolina. All members of AAWE and other interested parties are invited to attend the meeting to become involved in the activities of AAWE and to share ideas on possible ways to make the Organization the most effective in representing the interests of the Wind Engineering community.

The meeting will be held in the Board Room of the Conference Center at Clemson University. An agenda for the meeting will be posted at a later time on the AAWE web site. If it is not possible to attend the meeting, please send ideas and suggestions for activities that AAWE could or should undertake to: aawe@aawe.org or mail to AAWE, c/o Prof. Michael P. Gaus, Dept. of Civil Engineering, Room 212 Ketter Hall, University at Buffalo, Buffalo, NY 14260-4300.

AMERICAN ASSOCIATION FOR WIND ENGINEERING

www.aawe.org

E-mail: aawe@aawe.org

Tel: 716-645-2114 x-2410

Fax: 716-645-3733



**American Association
for Wind Engineering**

OBJECTIVES

The American Association for Wind Engineering (AAWE) was established in 1966. The objectives of AAWE are: (1) the advancement of the science and practice of wind engineering and (2) the solution of national wind engineering problems through transfer of new knowledge into practice.

CURRENT OFFICERS

President: M. P. Gaus (Univ. of Buffalo)

Vice President: B. Bienkiewicz (Colorado State Univ.)

Secretary/Treasurer: P. Sarkar (Iowa State Univ.)

Board of Directors: A. Chiu (Univ. of Hawaii), T. Gibbs, J. Golden (NOAA), T. L. Smith (T. L. Smith Consulting, Inc.), A. Kareem (Univ. of Notre Dame).

WHY YOU SHOULD JOIN:

AAWE provides networking opportunity with U.S. wind engineering community through regular and special publications, e-mail communication, internet resources, and technical meetings.

HOW TO JOIN

Fill-in the Membership Application/Renewal Form and forward it to AAWE Secretary/Treasurer. For more information visit AAWE web site or contact Mike Gaus (gaus@eng.buffalo.edu, 716-645-2114 x-2410, voice) or Bo Bienkiewicz (bogusz@engr.colostate.edu, 970-491-8232, voice).

Get involved in formulating
National Wind Hazard Reduction Program

Please Post

AMERICAN ASSOCIATION FOR WIND ENGINEERING

www.aawe.org

E-mail: aawe@aawe.org

Tel: 716-645-2114 x-2410

Fax: 716-645-3733



**American Association
for Wind Engineering**

Membership Application/Renewal Membership Year: July 1, 2000 - December 31, 2001

Dues (Check appropriate category):

Individual Membership: \$40____, Student \$10 ____

Corporate Membership; \$500 or more: ____ . Corporate membership can include up to five individual members. Complete one form for each individual member.

Please make checks or other payments (in U.S. \$ equivalents only) payable to American Association for Wind Engineering and mail to:

Dr. Partha Sarkar, Dept. of Aerospace Engr. & Engr. Mechanics
2271 Howe Hall, Room 1200, Iowa State University, Ames, IA 50011 -2271
 E-mail: ppsarkar@iastate.edu, Tel: 515-294-0719, Fax: 515-294-3260

Name: _____

Title: _____

Affiliation _____

City _____ State/Zip _____

Country _____

Ph: _____ Fax: _____

E-mail _____

Your Wind Engineering Interests _____

From the Editor

Contributors to this Newsletter:

Scott Schiff and associates at Clemson University, Program for Americas Conference on Wind Engineering-2001.

Michel Boudreau, Canadian Wood Council; Wood-Works article.

Material for articles in the Wind Engineer are welcomed.

Please forward your contributions for The Wind Engineer, to bogusz@enr.colostate.edu.

WIND ENGINEERING AND RELATED CONFERENCES January 2001 Update

MAY 21-23

*ASCE Structures Congress & Exposition
Washington, DC*

Contact:

E-mail: structurescongress@nist.gov

<http://www.asce.org/conferences/structures2001>

JUNE 2-6

*3rd European & African Conference on
Wind Engineering (3 EACWE)
Eindhoven, The Netherlands,*

Chair: Prof. Jacob A. Wisse

Department of Architecture, Building and Planning
Eindhoven University of Technology

E-mail: bwjwisse@bwk.tue.nl

Contact: 3EACWE, Congress Office
Eindhoven University of Technology
P.O. Box 513, NL 5600 MB Eindhoven
The Netherlands

Fax: +31-40-2458195

E-mail: congressoffice@tue.nl

<http://www.bwk.tue.nl/bwk/events/3eacwe>

JUNE 4-6

*Americas Conference on Wind Engineering-2001
(formerly US National Conference on Wind
Engineering), Clemson, SC, USA*

Contact: A conference brochure and information is available from: Americas Conference on Wind Engineering-2001, Civil Engineering Department, Lowry Hall, Box 340911, Clemson University,

Clemson, SC 29634-0911

Attn: Prof. Scott D. Schiff

Ph: +1-864-656-0456 Fax: +1-864-656-2670

E-mail: acwe@ces.clemson.edu

<http://www.clemson.edu/acwe>

SEPTEMBER 3 - 5

*International Workshop on Physical Modeling
of Flow and Dispersion Phenomena*

Hamburg, Germany

Contact: Prof. M. Schatzmann

E-mail: schatzmann@dkrz.de

<http://www.mi.uni-hamburg.de/phymod2001>

OCTOBER 18-20

*UNESCO Workshop at the Institute for
Catastrophic Loss Reduction, Univ. of Western
Ontario, London, Ontario, Canada N6A5B9*

Contact: Dr. S. Simonovic

E-mail: simonovic@uwo.ca

OCTOBER 21-26

*5th Asia-Pacific Conf. on Wind Engineering
(APCWE V, formerly APSOWE V)*

Kyoto, Japan

Chair: Prof. M. Matsumoto

Contact: APCWE V Secretariat

Department of Global Environment Engineering
Kyoto University, Yoshida Honmachi, Sakyo-ku,
Kyoto, 606-8501, Japan

Ph: +81-75-753-5092 Fax: +81-75-761-0646

E-mail: apcwe5@brdgeng.gee.kyoto-u.ac.jp

<http://www.soc.nacsis.ac.jp/jawe/apcwe5>

2002

APRIL 4-6

*ASCE Structures Congress & Exposition
Denver, CO, USA*

Contact:

E-mail: fcharney@schnebel-eng.com

<http://www.asce.org/conferences/structures2002>

2003

JUNE 2-5

*11th International Conference on Wind
Engineering, Lubbock, TX, USA*

Contact: Prof. K. C. Mehta

E-mail: Kishor.Mehta@WIND.TTU.EDU

<http://www.icwe.ttu.edu>

**AMERICAN ASSOCIATION FOR WIND ENGINEERING
WWW.AAWE.ORG**

c/o Department of Civil Engineering, Room 212 Ketter Hall
Univ. at Buffalo Tel: 716-645-2114, X-2410
State University of New York Fax: 716-645-3733
Buffalo, New York 14260-4300 E-mail: aawe@aawe.org

President

Dr. Michael P. Gaus
Dept. of Civil Engineering
University at Buffalo
State University of New York
Buffalo, NY 14260-4300
E-mail: gaus@eng.buffalo.edu


Vice-President:

Dr. Bogusz (Bo) Bienkiewicz
Wind Engr. & Fluids Laboratory
Dept. of Civil Engineering
Colorado State University
Fort Collins, CO 80523
E-mail: bogusz@engr.colostate.edu

Secretary/Treasurer: Dr. Partha Sarkar
Dept. of Aerospace Eng. & Eng. Mechanics
Iowa State University
E-mail: ppsarkar@iastate.edu

Board of Directors:

Dr. Arthur Chiu
University of Hawaii
E-mail: achiu@hawaii.edu
Mr. Tony Gibbs
E-mail: tmgibbs@surfmail.caribsurf.com
Dr. Joseph Golden
National Oceanic and Atmospheric Administration
E-mail: jgolden@fsl.noaa.gov
Mr. Thomas L. Smith
T. L. Smith Consulting, Inc.
E-mail: TLSMITH@XTA.com
Dr. Ahsan Kareem, Past President
University of Notre Dame
E-mail: kareem@nd.edu



Objectives:

- ? The advancement of science and practice of wind engineering
- ? The solution of national wind engineering problems through transfer of new knowledge into practice

**American Association
for Wind Engineering**

Established in 1966

Corporate Members of AAWE:

Boundary Layer Wind Tunnel Laboratory, Univ. of Western Ontario
www.blwtl.uwo.ca
Cermak Peterka Petersen, Inc.
www.cppwind.com
Factory Mutual Engineering and Research Group
www.factorymutual.com
Lockheed Martin Technologies Co.
www.lmco.com
Rowan Davies Williams & Irwin Inc.
www.rwdi.com
Wind Engineering and Fluids Laboratory, Colorado State Univ.
www.windlab.colostate.edu
Wind Engineering Research Center, Texas Tech Univ.
www.wind.ttu.edu

American Association for Wind Engineering
c/o Dept. of Civil Engineering
Room 212 Ketter Hall
University at Buffalo
State University of New York
Buffalo, NY 14260-4300