#### LOCATIONS AND ACCOMMODATIONS SEMINARS

Hotel Reservations must be made 4 weeks prior to the seminar. Rates apply only the day before and the last day of the seminar.

#### CINCINNATI, OH/OCTOBER 29-30. 2009

Millennium Hotel Cincinnati 150 West 5th Street Cincinnati, OH 45202 513-352-2120 ASCE Hotel Rate: \$119 Single/Double

#### DALLAS, TX/DECEMBER 3-4, 2009

Embassy Suites Hotel Dallas Love Field 3880 West Northwest Hwv Dallas, TX 75220 214-357-4500 ASCE Hotel Rate: \$149 Single/Double

#### FT. LAUDERDALE, FL/FEBRUARY 11-12, 2010

Ocean Sky Hotel & Resort 4060 Galt Ocean Drive Ft. Lauderdale, FL 33308 954-565-6611 ASCE Hotel Rate: \$159 Single/Double

#### PHILADELPHIA, PA/MARCH 18-19, 2010

Embassy Suites Hotel Center City 1776 Benjamin Franklin Parkway Philadelphia, PA 19103 215-561-1776 ASCE Hotel Rate: \$169 Single/Double

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Register three or more from one organization for the same seminar/date/location and save 10% on each seminar registration. Registrations must be made at the same time to receive this discount. Discount registrations cannot be done online. They must be faxed to 703-295-6144.



ASCE offers online courses on a variety of technical and management topics, as well as courses on DVD and CD. For a complete listing of these courses or to register, please go to http://store.asce.org/view. ASCE members receive discounts of 15% or more on most online courses. Volume discounts available.

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ASCE has been approved as an Authorized Provider by the International Association for Continuing Education and Training (IACET), 1760 Old Meadow Road, Suite 500, McLean, VA 22102. In addition, ASCE follows NCEES guidelines on continuing professional competency. Since continuing education requirements for P.E. license renewal vary from state to state, ASCE strongly recommends that individuals regularly check with their state registration board(s) on their specific continuing education requirements that affect P.E. licensure and the ability to renew licensure. For details on your state's requirements, please go to: http://www.ncees.org/licensure/ licensing boards/.

Confirmation Letter and Time/Location: All seminar registrations will be confirmed by email within one week of receiving your registration. Seminar time, location and hotel information will be included with your confirmation letter. Seminar fees include all course materials. Fees do not include hotel accommodations or meals. Hotel reservations should be made early as discounted rates are subject to cut-off dates.

Instructor Substitution: ASCE reserves the right to substitute an equally-qualified instructor for any seminar should unforeseen circumstances arise.

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\*Price differential will be charged if a non-member is replacing a member. Transfer may only be used one time, no multiple transfers allowed.

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**On-Site Registration:** Registration is available on-site at the seminar; however, we cannot guarantee that course materials will be available that day. Course notes and other materials will be mailed to you approximately four weeks after the seminar. Please be sure to contact ASCE no later than the day before the seminar to confirm that the seminar will be held as planned.

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#### Wind Loads for Buildings and Other Structures

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Dallas, TX/December 3-4, 2009

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#### How to reach us:

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Continuing Education ASCE

# WIND LOADS FOR BUILDINGS AND OTHER STRUCTURES

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"This seminar was excellent. Every engineer should attend!" - Kishor Mehta, President, Restl Designers, Inc., Gaithersburg, MD

"The instructor was very knowledgeable and personable. This seminar offered an excellent balance of theory, code application, examples and beyond the code

- Scott Bush, Structural Engineer, Borton-Lawson, Bethlehem, PA

"The knowledge of the instructors and the interaction with the class took this seminar from very good to great! This curriculum is directly applicable to the

- Lloyd Chalker, Weyerhaeuser, Charlotte, NC

"This is the most beneficial course I have ever taken. It takes a complex issue and transforms the design process into something much less intimidating." - Kevin Kirkland, Sinclair & Associates, LLC, Greenville, SC

"Jon is an outstanding instructor! This was a concise seminar on a very complex subject that was brought down to a workable level." - Stephen Hoffman, Engineer, Hoffman Engineering, Paragon, IN



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## WIND LOADS FOR BUILDINGS AND OTHER STRUCTURES

#### PURPOSE AND BACKGROUND

In recent years the migration of people to the hurricane-prone coastline, general increase in the urban sprawl in the middle of the country, and the development of new high-tech, lightweight, building materials have increased the incidence of building disasters, and wind damage. Hurricanes Andrew (1992), Iniki (1992), Hugo (1989), four hurricanes of 2004, hurricanes Katrina, Rita and Wilma of 2005 and the Kansas-Oklahoma tornado outbreaks (1999 & 2003) were catastrophic demonstrations of the increasing vulnerability of buildings and other structures (tanks, signs, towers, etc.) to severe wind storms. Wind induced property losses now annually exceed the sum of all other losses from natural hazards.

This seminar addresses wind effects, provides guidelines for assessing design wind loads for buildings and other structures, and offers a discussion of the advantages of wind tunnel testing. This seminar is based on the ASCE publications "Minimum Design Loads for Buildings and Other Structures (ASCE 7)" and "Guide to the Use of the Wind Load Provisions." While much of the instruction focuses on assessing wind loads, a portion of the seminar is directed to review wind damage experience of the past thirty years and lessons learned from the experience.

DAY ONE of this seminar is devoted to a comprehensive review of basic wind engineering fundamentals and the background of the wind load provisions of the national standard, ASCE 7-05.

DAY TWO focuses on the application of national standard ASCE 7-05 with hands-on experience gained by working through a number of examples utilizing provisions of ASCE 7-05. A portion of the day includes going beyond the standards, with discussion of the determination of site specific wind speed, and wind tunnel testing.

#### The fundamental goals of the seminar are:

- To give you engineering understanding of wind, structural dynamics, and wind effects on buildings and structures
- To describe how ASCE 7-05 interprets and incorporates the fundamentals of wind engineering in the document
- To allow you to use provisions of ASCE 7-05 with correct interpretation to assess wind loads on buildings and structures

#### By attending this seminar you will:

- Gain an in-depth understanding of ASCE 7-05 wind load provisions and wind effects on buildings and other structures
- Discuss interpretations and limitations of key provisions of ASCE 7-05
- Have an opportunity to ask questions and discuss solutions with an expert who has over 35 years of experience dealing with wind effects
- Interact with participants from across the country to share knowledge of wind resistant design

#### SEMINAR BENEFITS

- Get comprehensive guidelines for assessing wind loads to be used in the design of buildings and other structures
- Review basic concepts of wind engineering (aerodynamics and structural dynamics)
- Learn how to identify a wind design problem
- Find out how wind damages buildings and ensure wind resistant construction
- Learn about wind tunnel testing and the interpretation of results
- Examine the provisions of ASCE 7-05
- Learn how to review wind speed data
- Use case studies to examine past performances of low, medium, and high-rise buildings in severe storms



#### LEARNING OUTCOMES

- Understand the fundamentals of wind engineering
- Learn how ASCE 7-05 interprets and incorporates those fundamentals of wind engineering
- Be able to calculate wind loads on buildings
- Learn relationship of ASCE 7 to IBC

#### ASSESSMENT OF LEARNING OUTCOMES

Students' achievement of the learning outcomes will be assessed through the development of example calculations in Sessions 6 and 7.

#### WHO SHOULD ATTEND?

Engineers, Architects, Building Officials, and others involved with the design, construction, operation and maintenance of buildings and other structures.

#### SPECIAL FEATURES

All attendees will receive a copy of the ASCE 7-05 "A Guide to the Use of Wind Load Provisions of ASCE 7-02" and a set of seminar notes.

#### SEMINAR INSTRUCTOR

JON D. RAGGETT, PH.D., P.E., S.E., M.ASCE, President, West Wind Laboratory, Inc., received a BSE from Princeton University in 1966, a MS from Stanford University in 1967 and a PhD from Princeton University in 1971, all from departments of civil engineering. His PhD thesis subject was the aeroelastic flutter vibrations of long-span bridges. He is a member of the honor societies Phi Beta Kappa, Sigma Xi, and Tau Beta Pi. He is a registered Structural Engineer in California and Washington, and registered Professional Engineer in Colorado, Ohio, and Florida.

From 1978 to 1997 he was president of J. D. Raggett and Associates, Inc., a structural engineering design and aerodynamics firm. From 1988 to the present he has been president of West Wind Laboratory, Inc., a wind engineering laboratory. He has been on the faculty of the engineering school at the University of Santa Clara from 1974 to 1978. He has been an adjunct professor in the Department of Mechanical Engineering of the Naval Postgraduate School from 1992 to the present and is part of the faculty team that is developing an online, distance learning, M. S. curriculum. He is also a director of DERI, a non-profit organization that designs and builds schools in developing countries.

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#### DAY ONE

Code Provisions General format Basic wind speed Importance factor Velocity pressure Gust effect factors Pressure/force coefficients Separation of load effects into main wind force resisting system (MWFRS) and components and cladding (C&C) Zoning and edge strips – why are they necessary? Limitations in application of standard

This online version of ASCE's seminar "Designing Aluminum Structures" will bring you up to speed with aluminum so that you can design with it as confidently as you would in steel or concrete. The course covers the types of structures aluminum is best suited for, aluminum product forms, the Aluminum Association's alloy and temper designation systems, the mechanical properties of aluminum, protecting against corrosion, tension members, local buckling, columns, beams, fatigue, welded, bolted, and screwed connections, and the effect of welding on member strength. 9 hours. 0.9 CEUs Newly Updated!

#### **LEADERSHIP DEVELOPMENT FOR THE ENGINEER - ONLINE COURSE**

#### WIND LOADS - ONLINE COURSE

An online version of the Wind Loads seminar. Topics include wind effects (e.g., Bernoulli's equation), patterns over buildings, and effects of roof geometry), basic design wind speed, design wind loads, how to use the ASCE standard (plus three worked solutions), frequently asked questions, other codes, and where to get further information. After completing the course, you will have a thorough understanding of the main concepts of wind effects, and be able to use the standard to calculate wind loads for any structure, 9 hours. 9.0 PDHs

#### WIND LOADS - WEB SEMINAR-ON-CD

Presented in this four part series of one-hour web seminars is an overview of the provisions, examples problems, and a look behind the equations that will increase your intuition about how to properly apply the provisions. The series is designed for engineers, architects and building officials who need to understand the latest requirements in wind loads. The newest building codes (IBC, NFPA, and Florida) reference the wind provisions of ASCE 7 Standard - Minimum Design Loads for Buildings and Other Structures, 4 hours. 0.4 CEUs



## **Summary Outline**

## Wind Engineering Concepts Wind Characteristics

Historical wind speed data Engineering description of the wind Fundamentals of aerodynamics Fundamentals of structural dynamics Practical knowledge about hurricanes and tornadoes

#### Wind Loading Provisions of ASCE 7-05

### **TIME:** 8:30am – 4:30pm

#### DAY TWO

#### Application of the wind load provisions

Examples of wind loads Low rise buildings Medium rise buildings Topographical effects

#### Wind Tunnel Tests

Boundary-layer and aerodynamic wind tunnels Factors affecting decisions to conduct wind tunnel tests Information obtained from wind tunnel tests Use of results in standard provisions

#### **Other Codes and Standards**

New International Building Code Deem-to-comply standards Use of Foreign codes and standards

## **ASCE DISTANCE LEARNING**

#### **DESIGNING ALUMINUM STRUCTURES - ONLINE COURSE**

As we advance into the 21st century, the engineer manager must not only be technically competent, but must also possess the leadership skills to move an organization forward and to advance his/her career. This course will help you develop or expand your leadership skills. You will learn how to: successfully lead an organization or department; under-stand yourself and your staff, including generational differences; apply a leadership style which is appropriate to the situation; apply systematic decision-making processes while considering the critical role of intuition; lead change while maintaining motivation; apply the "art" of leadership or the "discipline" of management; effectively communicate and provide feedback considering the differences in the way men and women communicative; and form and lead effective teams. The course also includes one hour of ethics training. 9 hours. 0.9 CEUs