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# Virginia Wood Solutions Fair

**JANUARY 8, 2013**

**HILTON ALEXANDRIA MARK CENTER**  
5000 Seminary Road • Alexandria, VA 22311

*Earn 6 AIA/CES CEHs or PDH credits free*



Register at [woodworks.org](http://woodworks.org)

# Virginia Wood Solutions Fair Schedule

**Space is limited.  
Register today!**

7:00 am	Registration Check-in – Exhibit Hall Opens				
	ROOM 1	ROOM 2	ROOM 3	ROOM 4	ROOM 5
8:00 am - 9:05 am	2012 National Design Specification® for Wood Construction  <i>Credit: HSW</i>	Wood-frame Student Housing: A Builder's Perspective  <i>Credit: HSW</i>	Designing the World's Tallest Mixed-use Wood Building  <i>Credit: HSW</i>	Innovations with Wood: The Duke School in Durham, NC  <i>Credit: HSW</i>	Using Software to Design Multi-story Wood Buildings  <i>Credit: HSW</i>
9:05 am - 9:35 am	Break – Exhibit Expo				
9:35 am - 10:35 am	Building Codes and Standards Update  <i>Credit: HSW</i>	Understanding the Design Requirements for Five-story Wood-framed Mid-rise Construction  <i>Credit: HSW</i>	Heavy Timber Inspiration: Celebrated Wood Structures  <i>Credit: HSW</i>	Modular Wood Framing Goes Vertical  <i>Credit: HSW</i>	Introduction to Post-frame Construction, Buildings and Design  <i>Credit: HSW</i>
10:35 am - 11:05 am	Break – Exhibit Expo				
11:05 am - 12:05 pm	Hurricanes, Earthquakes and Tornadoes: Wood Design for Extreme Forces  <i>Credit: HSW</i>	All-wood and Hybrid Panelized Roof Systems: Cost-effective Roof Solutions  <i>Credit: HSW</i>	Efficient Use of Wood Framing in Retail Buildings  <i>Credit: HSW</i>	The International Green Construction Code: Implications for Wood Construction  <i>Credit: HSW/ISD</i>	Fire-Retardant Treated Wood and the International Building Code  <i>Credit: HSW</i>
12:05 pm - 1:10 pm	<p style="text-align: center;"><b>Lunch and Keynote Speaker: Paul Howe</b>  <i>Executive Director of the Virginia Forestry Association</i>  <b>Sustainability in Virginia: Making Use of a Renewable Resource</b></p>				
1:10 pm - 2:10 pm	Connection Solutions for Wood-frame Structures  <i>Credit: HSW</i>	Understanding the Design Requirements for Five-story Wood-framed Mid-rise Construction  <i>Credit: HSW</i>	Designing the World's Tallest Mixed-use Wood Building  <i>Credit: HSW</i>	Modular Wood Framing Goes Vertical  <i>Credit: HSW</i>	The Future of Structural Insulated Panels as a Commercial Building Envelope  <i>Credit: HSW/ISD</i>
2:10 pm - 2:45 pm	Break – Exhibit Expo				
2:45 pm - 3:45 pm	Building Codes and Standards Update  <i>Credit: HSW</i>	Wood-frame Student Housing: A Builder's Perspective  <i>Credit: HSW</i>	Heavy Timber Inspiration: Celebrated Wood Structures  <i>Credit: HSW</i>	Innovations with Wood: The Duke School in Durham, NC  <i>Credit: HSW</i>	Architectural Casework  <i>Credit: HSW</i>
3:45 pm - 3:55 pm	Break				
3:55 pm - 4:55 pm	Hurricanes, Earthquakes and Tornadoes: Wood Design for Extreme Forces  <i>Credit: HSW</i>	All-wood and Hybrid Panelized Roof Systems: Cost-effective Roof Solutions  <i>Credit: HSW</i>	Efficient Use of Wood Framing in Retail Buildings  <i>Credit: HSW</i>	The International Green Construction Code: Implications for Wood Construction  <i>Credit: HSW/ISD</i>	Sustainable Design: Western Red Cedar  <i>Credit: HSW/ISD</i>

# Seminars and Speakers

## KEYNOTE SPEAKER

12:05 PM

### **Sustainability in Virginia: Making Use of a Renewable Resource**

*Paul Howe, Virginia Forestry Association*

In the US, responsible forest management has resulted in more than 50 consecutive years of forest growth that exceeds annual forest harvests. This presentation will provide an overview of Virginia's forest resource status, including factors that impact sustainability and, therefore, future wood availability and use. Unlike products that deplete the earth's resources, wood is the only major building material that grows naturally and is renewable. Wood is also the only material with third-party certification programs in place to verify that products originate from a sustainably managed resource. Using Virginia as an example, Paul will show how today's forest practices maintain a balance of forest values, including water and soil quality, fish and wildlife habitat and biodiversity, as well as community and recreational opportunities.

MORNING SESSION 8:00 AM

### **2012 National Design Specification for Wood Construction**

*John "Buddy" Showalter, PE, American Wood Council*

The *National Design Specification (NDS®) for Wood Construction* is the dual format Allowable Stress Design (ASD) and Load Resistance Factor Design (LRFD) document referenced in US building codes and used to design wood structures worldwide. In this seminar, participants will learn about changes in the 2012 NDS and Supplement relative to previous editions.

MORNING SESSION 9:35 AM • AFTERNOON SESSION 2:45 PM

### **Building Codes and Standards Update**

*Paul Coats, PE, CBO, American Wood Council*

What are the latest trends and topics in the world of code development? How are the wood design standards keeping up with technology? What kinds of things are being proposed by the ICC Code Action Committees? This will be a "high altitude" look at recent activities of the International Code Council, the American Wood Council, and the states and jurisdictions that are using their codes and standards. In the process, the latest code changes and their underlying issues will be identified.

MORNING SESSION 11:05 AM • AFTERNOON SESSION 3:55 PM

### **Hurricanes, Earthquakes, and Tornadoes: Wood Design for Extreme Forces**

*Bryan Readling, PE, APA*

The overall strength of a building is a function of all of the components—roof, walls, floors, and foundation—working together as a unit. This session provides a top to bottom overview

of lateral design for wood-frame structures. Topics will include lessons learned from natural disasters, structural load-path continuity, and recent evolution in shear wall and uplift-resistant design.

AFTERNOON SESSION 1:10 PM

### **Connection Solutions for Wood-frame Structures**

*John "Buddy" Showalter, PE, American Wood Council*

One of the biggest "eye openers" for those new to the design of non-residential wood buildings is that designing and detailing the connections is not as complex as imagined. This seminar will feature an overview of common fastener types and the wood connection philosophies relevant to each. Topics will include techniques for designing efficient, durable and structurally safe connections, minimizing environmental effects on wood connections, and available resources.

MORNING SESSION 8:00 AM • AFTERNOON SESSION 2:45 PM

### **Wood-frame Student Housing: A Builder's Perspective**

*Robert Kochansky, LEED AP, Hardin Construction*

Using actual student housing project examples, this presentation will focus on the construction of mid-rise/multi-family wood structures from a builder's point of view. In the eastern US, mid-rise wood buildings are growing in popularity because they offer cost savings while delivering a number of other advantages. Learn how one builder perceives this trend and what he sees as the challenges and opportunities.

MORNING SESSION 9:35 AM • AFTERNOON SESSION 1:10 PM

### **Understanding the Design Requirements for Five-story Wood-framed Mid-rise Construction**

*Tim Smith, AIA, Togawa Smith Martin, Inc.*

This presentation will unravel the mystery of how to design five-story wood-frame residential buildings and six-story mixed-use projects within the *International Building Code (IBC)*. Discussion will provide an architect's point of view on code requirements with an emphasis on height and area limitations. Topics will include technical challenges such as how to design for wind and seismic forces, how to control shrinkage, and enhanced fire protection requirements.

MORNING SESSION 11:05 AM • AFTERNOON SESSION 3:55 PM

### **All-wood and Hybrid Panelized Roof Systems: Cost-effective Roof Solutions**

*Tim McCarthy, PE, BS Eng, M.ASCE*

Although panelized roof systems are especially popular in industrial building applications on the west coast, they can be used to reduce building costs in retail, commercial and office applications all over the US. Learn why panelized roof systems are so cost-effective and how to efficiently design and install them. Other topics will include solutions for structural loading, fire protection and constructability, additional benefits and design resources.

## Seminars and Speakers (continued)

MORNING SESSION 8:00 AM • AFTERNOON SESSION 1:10 PM

### **Designing the World's Tallest Mixed-use Wood Building**

*Andrew Waugh, Waugh Thistleton Architects*

This session will focus on the design and construction of the nine-story Stadthaus building in London (UK), which is the world's tallest mixed-use wood structure. It will emphasize the unique features that allowed nine stories to be erected in nine weeks, shortening the entire construction schedule by 23 weeks while satisfying safety and other building code requirements. Built in cross laminated timber (CLT), the Stadthaus includes 29 apartments and a residents' office, and is a modern and engaging counterpart to the neighborhood's ground-hugging slab blocks built in the 1950s and '60s.

MORNING SESSION 9:35 AM • AFTERNOON SESSION 2:45 PM

### **Heavy Timber Inspiration: Celebrated Wood Structures**

*Ben Brungraber, PhD, PE, Fire Tower Engineered Timber*

Timber framing is defined as the craft of building structures that are supported by exposed, heavy timbers. The connections are often traditional: pegged mortise and tenons, splines, keys, wedges, and simple bearing joinery. This presentation covers the past, present and future of timber framing. It will include examples of timber-framed commercial and residential structures illustrating a wide variety of timbers and connections.

MORNING SESSION 11:05 AM • AFTERNOON SESSION 3:55 PM

### **Efficient Use of Wood Framing in Retail Buildings**

*Archie Landreman, WoodWorks*

This presentation will explain the advantages of various structural wood products when used in retail buildings. Products discussed will include: wood trusses, wall panels, I-joists, glued laminated timber (glulam), and structural insulated panels (SIPs). These products will be examined from a variety of perspectives, including cost savings, sustainability, labor and time savings, and availability. Specific applications and product differences will be discussed.

MORNING SESSION 8:00 AM • AFTERNOON SESSION 2:45 PM

### **Innovations with Wood: The Duke School in Durham, NC**

*Robert Sotolongo, AIA, LEED AP, DTW Architects and Planners*

After an introduction to the use of wood framing in US school construction, architect Robert Sotolongo will share his insights on the design process and decisions made for the Duke schools in North Carolina, including master planning, structural systems, and methods for achieving energy and acoustical performance. Features such as the exposed wood-frame roof system will be investigated, along with common considerations related to the use of wood in schools.

MORNING SESSION 9:35 AM • AFTERNOON SESSION 1:10 PM

### **Modular Wood Framing Goes Vertical**

*Troy E. Bean, PE, SE, DCI Engineers*

As with wood construction in general, innovative technologies are expanding the options for modular wood-frame buildings. No longer limited to one-story classrooms, work camps or single-family homes, there is a move to incorporate these factory-built units into applications such as hotels, dorms and condominiums that compete with four- and five-story podium design. This presentation will focus on techniques that differentiate modular wood-frame construction from conventional, panelized or prefabricated wood framing methods, as well as cost and other advantages.

MORNING SESSION 11:05 AM • AFTERNOON SESSION 3:55 PM

### **The International Green Construction Code: Implications for Wood Construction**

*Kathryn Fernholtz, Dovetail Partners, Inc.*

This presentation will delve into provisions of the 2012 *International Green Construction Code (IgCC)*, examining organization, fundamentals, mandatory requirements vs. electives, and the role of local jurisdictions and project developers in determining code requirements. A particular focus will be provisions regarding materials selection, and especially building specification and use of wood. Language relative to use of life cycle assessment in building design and materials selection will also be examined. Similar provisions of ASHRAE 189.1, an alternative compliance path for those following the IgCC, will be considered, as will required and voluntary elements of various green building programs and other code initiatives.

MORNING SESSION 8:00 AM

### **Using Software to Design Multi-story Wood Buildings**

*Michael Olson, PE, RISA Technologies*

See how engineering software can be used to design multi-story buildings featuring wood walls, wood diaphragms, glued laminated timber (glulam), and dimension lumber. Learn how wind and seismic loads are automatically generated and applied to the structure, and how finite element analysis offers improved accuracy over conventional hand calculation methods. A special emphasis will be placed on the design of an entire building for both strength and serviceability requirements.

MORNING SESSION 9:35 AM

### **Introduction to Post-frame Construction, Buildings and Design**

*Dr. Harvey Manbeck, PE, National Frame Builders Association*

This presentation will focus on post-frame building systems in comparison to other wood-frame construction types. Topics will include: unique features that make post-frame systems a cost and energy-efficient option with great flexibility in architectural detailing, the two primary structural design approaches, embedded post foundations, structural diaphragms and shear walls for lateral load distribution, structural integrity and longevity, code compliance issues and preservative treatment for embedded wood posts. The flexibility of post-frame applications will also be illustrated with examples from a range of projects.

## Seminars and Speakers (continued)

MORNING SESSION 11:05 AM

### **Fire-Retardant Treated Wood and the International Building Code**

*Jim Gogolski, Hoover Treated Wood Products*

This presentation takes an in-depth look at fire-retardant treated wood (FRTW) focusing on: FRTW characteristics, properties and performance in a fire; preparation, treatment, inspection and labeling; fire tests, standards and building code requirements; how and where FRTW is used; and the impact of FRTW on construction and insurance costs.

AFTERNOON SESSION 1:10 PM

### **The Future of Structural Insulated Panels as a Commercial Building Envelope**

*Al Cobb, Structural Insulated Panel Association*

This presentation will focus on the growing acceptance and use of Structural Insulated Panels (SIPs) in non-residential buildings. Starting with an overview of the events that led to the current popularity of SIPs, Al will provide examples of their successful use in commercial projects, as well as information on their proper design and specification, the need for a systems approach, and the services required to make them effective.

AFTERNOON SESSION 2:45 PM

### **Architectural Casework**

*Randy Estabrooke, Architectural Woodwork Institute*

This presentation will provide design professionals with an understanding of the casework requirements as published in the *Architectural Woodwork Standards, Edition One (AWS)*. Attendees will learn how to navigate the AWS and to better understand the differences in Premium Grade vs. Custom Grade casework that allow for balanced cost-to-benefit decisions in contract documents. At the conclusion of the presentation, attendees will have a good overview of custom architectural casework and what to expect in finished products.

AFTERNOON SESSION 3:55 PM

### **Sustainable Designs: Western Red Cedar**

*Ed Burke, Western Red Cedar Lumber Association*

This presentation will focus on the sustainable nature of Western Red Cedar lumber and timber products. It will include an overview of the features and benefits of this natural forest product with an emphasis on grades, product specifications, installation, finishing, and maintenance. Participants can expect to gain a greater appreciation of Western Red Cedar's versatility and the enhanced appeal it can bring to both commercial and residential designs, as well as the latest design trends. Finally, this session will also touch on forest certification systems and the attributes that make wood an inherently 'green' building material.

## **Who Should Attend?**

With a full day of seminars and a trade exposition, the Virginia Wood Solutions Fair will pack an informational punch for architects, engineers, developers, code officials and anyone else interested in wood's exciting design possibilities. Register today if you'd like access to wood design experts for one-on-one support, informative seminars, technical information from manufacturers, engineering consultants and industry associations, and exhibits featuring a wide range of structural and finishing products.

## **How to Register**

To register, visit [woodworks.org](http://woodworks.org) and look under "Events" on the home page. As part of the registration process, you will be asked to choose which seminar you plan to attend in each time slot. Once your request has been processed, you will receive an email confirmation that your registration is complete. To help make your choices, speaker bios are available on the website.

## **Cost**

There is no cost to attend and complimentary lunch will be provided.

## **Education Credits**

Attendees can earn up to 6 AIA/CES CEHs or PDH credits (one per attended seminar). Please refer to the chart for HSW and HSW/SD details and visit [woodworks.org](http://woodworks.org) for learning objectives. AIA/CES forms and professional development certificates will be available on site.

## **More Information**

Visit [woodworks.org](http://woodworks.org)



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# WoodWorks

## **Free architectural and engineering support for wood buildings**

WoodWorks provides free resources that can help you design and build non-residential and multi-family structures out of wood more easily and at less cost. For one-on-one project support, online training, CAD/REVIT details, case studies and more, visit [woodworks.org](http://woodworks.org).



# WoodWorks

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