San Antonio Wood Solutions Fair

OCTOBER 2, 2012
Henry B. Gonzalez Convention Center

Earn 6 AIA/CES CEHs or PDH credits free

Register at woodworks.org
## San Antonio Wood Solutions Fair Schedule

**Space is limited. Register today!**

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<thead>
<tr>
<th>7:00 am</th>
<th><strong>Registration Check-in – Exhibit Hall Opens</strong></th>
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<tr>
<td></td>
<td>ROOM 1: Materials Matter: Design Trends for a Sustainable Future</td>
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<tr>
<th>8:00 am - 9:10 am</th>
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<td>9:45 am - 10:45 am</td>
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<td>10:45 am - 11:00 am</td>
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<td>11:00 am - Noon</td>
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<td>Noon - 1:10 pm</td>
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**Room Descriptions:**

- **ROOM 1**: Materials Matter: Design Trends for a Sustainable Future
- **ROOM 2**: Adventures in Engineering – Designing the Iconic Metropol Parasol
- **ROOM 3**: All-wood and Hybrid Panelized Roof Systems: Cost-effective Roof Solutions
- **ROOM 4**: Connection Solutions for Wood-frame Structures
- **ROOM 5**: Efficient use of Wood Framing in Retail Buildings
- **ROOM 6**: Structural Wood-to-wood Fasteners

**Panel Descriptions:**

- **Materials Matter**: Design Trends for a Sustainable Future
- **Adventures in Engineering**: Designing the Iconic Metropol Parasol
- **All-wood and Hybrid Panelized Roof Systems**: Cost-effective Roof Solutions
- **Connection Solutions for Wood-frame Structures**: Efficient use of Wood Framing in Retail Buildings
- **Structural Wood-to-wood Fasteners**
- **Using a Wood Podium in Mixed-use Design**: An Architectural Case Study
- **LCT ONE – Case Study of an Eight-story Wood Office Building**
- **Full-scale Shear Wall Tests for Forced Transfer around Openings**
- **2012 National Design Specification® for Wood Construction**
- **Understanding Your Environment: Forests, Trees and Responsible Wood Products**
- **Using Software to Design Multi-story Wood Buildings**
the courage to pursue innovative, never-tried solutions.

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specialists—found itself on an expedition in new technological
screw, the design team—architects, structural engineers and wood
this unique project. From the first sketches to the turn of the last
Koppitz will trace what he calls the “adventure” of engineering
timber structures. This presentation by project engineer Jan-Peter
Metropol Parasol in Seville, Spain is one of the world's largest
Recognized around the world for its unusual geometry, the iconic
Jan-Peter Koppitz, Dipl-Ing, Eur Ing, MIstructE CEng, Ove Arup & Partners
Designing the Iconic Metropol Parasol
MORNING SESSION 8:00 AM • AFTERNOON SESSION 1:10 PM
Materials Matter: Design Trends for a Sustainable Future
Cheryl Ciecko, AIA, ALA, LEED AP, WoodWorks
Today, moving forward means looking back to traditional, natural
materials and using them in new ways. Find out how wood
materials provide solutions in terms of durability, fire, moisture
and sustainability. Discover innovations that are allowing traditional
wood materials and systems to be the solution of choice for
a variety of building types, including four to six-story mid-rise
buildings, cross laminated timber structures up to 15 stories and
commercial structures of all types. Topics will also include Life
Cycle Assessment (LCA), Environmental Product Declarations,
green building rating systems, forest certification and biophilia.

MORNING SESSION 9:45 AM • AFTERNOON SESSION 2:45 PM
Using a Wood Podium in Mixed-use Design:
An Architectural Case Study
Karyn Beebe, PE, LEED AP, APA
Focusing on a successful, mixed-use redevelopment project in
the Sacramento Valley, this presentation will examine some of
the opportunities and challenges associated with mid-rise wood
design. Topics will include code analysis, occupancies, structural
considerations associated with a wood podium, management
of the design for longevity and sustainability.

MORNING SESSION 11:00 AM • AFTERNOON SESSION 3:55 PM
Case Study – Podium Designs and Mixed-use
Mid-rise Structures
Matthew S. Church, PE, Davis & Church, LLC
This session will examine mixed-use wood buildings across
North America. The discussion will focus on critical aspects of the
structural design, including material species and grade selection,
an economical approach to lateral load transfer and effects of
wood shrinkage. Examples of Type III and Type V construction, as
defined by the International Building Code, will be discussed along
with their inherent structural challenges. Other associated topics
will include rigid wood diaphragm design, stud wall design and
fire-retardant-treated lumber.

MORNING SESSION 8:00 AM • AFTERNOON SESSION 1:10 PM
Adventures in Engineering –
Designing the Iconic Metropol Parasol
Jan-Peter Koppitz, Dipl-Ing, Eur Ing, MstructE CEng, Ove Arup & Partners
Recognized around the world for its unusual geometry, the iconic
Metropol Parasol in Seville, Spain is one of the world’s largest
timber structures. This presentation by project engineer Jan-Peter
Koppitz will trace what he calls the “adventure” of engineering
this unique project. From the first sketches to the turn of the last
screw, the design team—architects, structural engineers and wood
specialists—found itself on an expedition in new technological
and architectural territory. This could only be managed with a
great deal of knowledge, experience and creativity, as well as
the courage to pursue innovative, never-tryt solutions.

MORNING SESSION 9:45 AM • AFTERNOON SESSION 2:45 PM
LCT ONE – Case Study of an Eight-story
Wood Office Building
Nabih Tahan, AIA, CREE
This presentation will describe the Life Cycle Tower ONE (LCT
ONE), an eight-story wood office building recently built in Austria.
LCT ONE was the culmination of a research project that resulted
in a system for building timber high-rises up to 30 stories. It is a solution that addresses climate change in the design and
construction industry, beginning with the choice of a natural,
renewable resource to replace steel, concrete and other fossil
fuel-intensive materials. Topics will include the motivation, research
and product development that preceded the construction of LCT
ONE, as well as production of the floor and wall components and
erction of the building envelope in just eight days.

MORNING SESSION 11:00 AM • AFTERNOON SESSION 3:55 PM
Case Study – Centre Pompidou-Metz
Andrew Lawrence, Arup
This case study presentation will focus on recent landmark
projects in Europe, including the new Metz Pompidou designed
in conjunction with Shigeru Ban and the Serpentine Pavilion with
Alvaro Siza. Through examples, Lawrence will demonstrate that,
because timber is easy to work with, the introduction of modern
fabrication techniques has given building designers the ability
to create truly unique structures. Topics will include the range
of wood species and engineered wood products available, their
manufacturing processes, and how the characteristics of each
can contribute to innovative and durable structures.

MORNING SESSION 8:00 AM • AFTERNOON SESSION 1:10 PM
All-wood and Hybrid Panelized Roof Systems:
Cost-effective Roof Solutions
Hoppy Post, Panelized Structures Inc.
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 cost effective and
how to efficiently design and install them. Other topics will include
solutions for structural loading, fire protection and constructability,
as well as additional benefits and design resources.

MORNING SESSION 9:45 AM • AFTERNOON SESSION 2:45 PM
Case Study – First Commercial Project
Opens Door for CLT in US
Darryl Byle, PE, CLT Solutions
This case study presentation will showcase the first commercial
building in the US constructed with cross laminated timber
(CLT)—The Long Hall in Whitefish, Montana. Completed in 2011,
this two-story infill project epitomizes many of the benefits of CLT,
including speed of installation, the environmental and aesthetic
benefits of wood, and energy efficiency. Topics will include the
design and construction process, building code challenges and
a cost analysis that compared CLT to concrete masonry units.
Seminars and Speakers (continued)

MORNING SESSION 11:00 AM • AFTERNOON SESSION 3:55 PM

Full-scale Shear Wall Tests for Forced Transfer around Openings
Karyn Beebe, PE, LEED AP, APA

A joint research project of APA – The Engineered Wood Association, University of British Columbia (UBC), and USDA Forest Products Laboratory was initiated in 2009 to examine the variations of walls with code-allowable openings. This presentation shares test results from the full-scale wall configurations (8 feet x 12 feet), which will be used in conjunction with the analytical results from a computer model developed by UBC to develop rational design methodologies for adoption in US codes and standards.

MORNING SESSION 8:00 AM • 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, simple design examples and available resources.

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

Designing Wood-frame Schools in the Bethel School District
James Hansen, Bethel Public Schools

This presentation will investigate the use of wood framing in Washington State’s Bethel School District, with an emphasis on energy efficiency, building costs and benefits to the local community. It will be delivered by the District’s Director of Construction & Planning, who was instrumental in the development of green building standards for public schools and under whose leadership the District has constructed 10 schools utilizing Washington State Sustainable Protocols.

MORNING SESSION 11:00 AM • AFTERNOON SESSION 3:55 PM

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 how to apply ASD and LRFD provisions to wood construction, and their similarities/differences with respect to design values and behavioral equations.

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

Efficient Use of Wood Framing in Retail Buildings
Archie Landreman, WoodWorks

This presentation examines the advantages of various structural wood products when used in retail buildings, including: wood trusses, wall panels, I-joists, glued laminated timber (glulam), and Structural Insulated Panels (SIPs). These products will be considered 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 9:45 AM • AFTERNOON SESSION 2:45 PM

Structural Durability:
The Proper Use of Preservative Treated Wood
Tom Milton, WoodWorks

Wood buildings can be highly durable, lasting hundreds of years, provided they are built in a way that minimizes moisture exposure and potential wood deterioration. Preventing deterioration starts by diverting and controlling moisture through proper design using eaves, overhangs, orientation, flashing, spacing, column bases and other details. However, where moisture exposure to structural wood products cannot be prevented, preservative treated wood is required by building codes and must be specified. This presentation discusses how to specify and use preservative treated wood and illustrates relevant design details.

MORNING SESSION 11:00 AM • AFTERNOON SESSION 3:55 PM

Understanding Your Environment:
Forests, Trees and Responsible Wood Products
Kathryn Fernholz, Dovetail Partners, Inc.

This presentation will address key questions about forests, forestry and wood products. What makes a forest ecosystem? What is responsible forest management? What kind of forests do we have in the US? Topics discussed will help connect what happens in our forests to the use of responsible wood products and green building programs.

MORNING SESSION 8:00 AM

Structural Wood-to-wood Fasteners
Brent Kreutzer, FastenMaster

This presentation will provide an overview of the fastening and connection requirements for wood structural members to resist the loads imposed in wood-frame construction. Topics will include how connections are affected by wood properties, moisture content, loading direction and dowel bearing strength, as well as the evolution of fasteners including their nomenclature (or anatomy), strength properties and other features. The recent development of structural wood screws and their use in various applications will also be discussed.

MORNING SESSION 9:45 AM

The Future of Structural Insulated Panels as a Commercial Building Envelope
Travis Santi, 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.
**MORNING SESSION 11:00 AM**

**Introduction to Post-frame Construction, Buildings and Design**
Dr. Harvey Manbeck, PE, National Frame Building 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.

**AFTERNOON SESSION 1:10 PM**

**Architectural Casework**
Greg Lutz, Architectural Woodwork Institute

This presentation provides 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 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, attendees will have gained a solid overview of custom architectural casework and what to expect in finished products.

**AFTERNOON SESSION 2:45 PM**

**Sustainable Designs: Western Red Cedar**
Steve From, Western Red Cedar Lumber Association

This presentation will include information basic to lumber and forest products while emphasizing the particular characteristics of Western Red Cedar, its benefits and use in sustainable design. Topics will include Western Red Cedar lumber grades, installation and finishing, as well as forest certification and why wood from North American forests is the most appropriate choice for a truly sustainable design.

**AFTERNOON SESSION 3:55 PM**

**Using Software to Design Multi-story Wood Buildings**
Amber Freund, 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.

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**Who Should Attend?**

With a full day of seminars and a trade exposition, the San Antonio 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 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 for learning objectives. AIA/CES forms and professional development certificates will be available on site.

**More Information**

Visit 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.

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Photo credit: Metropol Parasol, Jürgen Mayer H and Arup, photo Hufton & Crow