Welcome to the 32nd Annual Timber Framers Guild Conference! On behalf of the Board, we are delighted to have you join us here in Madison, Wisconsin.

We have a varied and dynamic schedule this year, thanks to our Conference Committee, led by Chair Megan Starr. In addition to the always stellar lineup of classroom sessions, we will be building a bridge and busting bents (among other things). The program at the historic Edgewater Hotel will have something for everyone, offering outstanding depth and breadth for everyone from the novice timber framer to the seasoned pro. Many thanks to Megan and her Conference Committee team of Brenda Baker, Rick & Nicole Collins, Michael Cuba, Curtis Milton, and Autumn Peterson for their outstanding work.

We would also like to thank our sponsors. Our sponsors were generous with their time and resources, and we welcomed several in-kind donations of materials this year. Sponsors for the 2017 TFG Conference include Trillium Dell Timberworks, Heritage Natural Finishes, Fire Tower Engineered Timber, Pioneer Millworks, Simpson Strong-Tie, Hochstetler Milling, Timberlinx, Fraserwood Industries, Boards by George, Rocky Mountain Joinery Center, the TFG Apprentice Training Program, and the University of Wyoming. Without their support, we would not be able to offer such great activities and speakers. If you see a sponsor, be sure to thank them for their support of our Guild!

Our speakers are, as always, the great binding force of our conference. We have a wide range of experience and expertise, with presentations on historic joinery of the Midwest and net zero energy, as well as skills training opportunities like thatching and application of finishes. A special thanks to this year’s featured speakers: Gerald Epp of StructureCraft will speak about how modern architecture expands the boundaries of what wood can do; Tedd Benson will lead a featured panel along with his compatriots from Bensonwood on LEAN thinking and its applications in the timber framing industry; and star alum of This Old House Steve Thomas will talk about “Building Green on the Pale Blue Dot.”

Thank you for joining us, and welcome! We hope you enjoy your time with us and are looking forward to this great conference as much as we are!

In the cause,

Mack Magee, Board President

Jeff Arvin, Executive Director
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<td>Conference Registration Available in Edgewater Lobby</td>
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<tr>
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<td>7:00 - 8:00</td>
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<td>TFG Benefit Auction</td>
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### Building Science & Engineering

**Grand Ballroom A**

- **Friday, May 19th** 5:00 - 7:00
- **Saturday, May 20th**
  - 7:00 - 8:00: Breakfast (Nolen Gallery)
  - 8:00 - 8:30: Welcome & Opening Comments (Grand A + B)
  - 8:30-9:30: FEATURING SPEAKER: Gerry Epp (Grand A + B)
  - 9:30-10:00: A Bucket of Opportunity: How One Company Went From A Catastrophic Building Failure to the First Complete CLT Heavy Timber Building, with Wood Fiber Insulation, in New York State Jonathan Orpin

### History & Tradition

**Grand Ballroom B**

- **Friday, May 19th** 5:00 - 7:00
- **Saturday, May 20th**
  - 7:00 - 8:00: Breakfast (Nolen Gallery)
  - 8:00 - 8:30: Welcome & Opening Comments (Grand A + B)
  - 8:30-9:30: FEATURING SPEAKER: Gerry Epp (Grand A + B)
  - 9:30-10:00: A Bucket of Opportunity: How One Company Went From A Catastrophic Building Failure to the First Complete CLT Heavy Timber Building, with Wood Fiber Insulation, in New York State Jonathan Orpin

### Skill & Craftsmanship

**Mendota A**

- **Friday, May 19th** 5:00 - 7:00
- **Saturday, May 20th**
  - 7:00 - 8:00: Breakfast (Nolen Gallery)
  - 8:00 - 8:30: Welcome & Opening Comments (Grand A + B)
  - 8:30-9:30: FEATURING SPEAKER: Gerry Epp (Grand A + B)
  - 9:30-10:00: A Bucket of Opportunity: How One Company Went From A Catastrophic Building Failure to the First Complete CLT Heavy Timber Building, with Wood Fiber Insulation, in New York State Jonathan Orpin

### Tradition Meets Innovation

**Mendota BC**

- **Friday, May 19th** 5:00 - 7:00
- **Saturday, May 20th**
  - 7:00 - 8:00: Breakfast (Nolen Gallery)
  - 8:00 - 8:30: Welcome & Opening Comments (Grand A + B)
  - 8:30-9:30: FEATURING SPEAKER: Gerry Epp (Grand A + B)
  - 9:30-10:00: A Bucket of Opportunity: How One Company Went From A Catastrophic Building Failure to the First Complete CLT Heavy Timber Building, with Wood Fiber Insulation, in New York State Jonathan Orpin

### Other Events

- **Break - Bookstore & Trade Show Open** (Bookstore sponsored by Heritage Natural Finishes)
- **Conference Registration Available** in Edgewater Lobby
# SCHEDULE AT A GLANCE

## Sunday - Monday

### Sunday, May 21

<table>
<thead>
<tr>
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<tr>
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<td>Working With Finishes for Timber Frame Structures</td>
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<td>9:30 - 10:30</td>
<td>Engineered Connections in Modern West Coast Timber Framing</td>
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<td>3:00 - 4:00</td>
<td>Bent Busting (Ballroom A) / Tool Sharpening (Mendota A) / Thatching</td>
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<tr>
<td>4:00 - 5:00</td>
<td>Thatching Demonstration</td>
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### Monday, May 22

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<tr>
<td>7:00 - 8:00</td>
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<tr>
<td>8:00 - 9:15</td>
<td>Net Zero Energy</td>
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<tr>
<td>9:15 - 9:30</td>
<td>Break</td>
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<tr>
<td>9:30 - 11:00</td>
<td>FEATURED SPEAKER: Steve Thomas - Sponsored by Hochstetler Milling</td>
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<tr>
<td>11:00-11:15</td>
<td>Closing Remarks</td>
</tr>
</tbody>
</table>
Agenda At-A-Glance
Sessions with a * are AIA-approved

WEDNESDAY, MAY 17
8:30 a.m.—5:00 p.m.       Pre-conference Workshop

♦ Level 2 Wood Species Identification Workshop*
  University of Wisconsin-Madison Department of Botany

THURSDAY, MAY 18
8:00 a.m.—5:00 p.m.      Pre-conference Programs

♦ Complex German Roof Framing (Day 1)
  US Forest Products Laboratory
♦ Timber Frame Engineering Council Symposium (Day 1)*
  Best Western InnTowner Madison

FRIDAY, MAY 19
8:00 a.m.—5:00 p.m.      Pre-conference Programs

♦ Complex German Roof Framing (Day 2)
  US Forest Products Laboratory
♦ Timber Frame Engineering Council Symposium (Day 2)*
  Best Western InnTowner Madison/US Forest Products Laboratory
♦ Self-Guided Madison Area Timber Tour

SATURDAY, MAY 20
Agenda Subject to Change

7:00 a.m.—8:00 a.m.     Breakfast

8:00 a.m.—8:30 a.m.     Welcome & Opening Comments

8:30 a.m.—9:30 a.m.     FEATURED SPEAKER: Gerry Epp*
                         New Ways to Frame Timber
                         (Sponsored by Timberlinx)

9:30 a.m.—10:00 a.m.    Break—Bookstore & Trade Show Open
                         (Bookstore sponsored by Heritage Natural Finishes)

10:00 a.m.—11:30 a.m.   Courses

♦ How Timber Framers Talk to Designers*
  Sam Marts & Robert Foulkes (Building Science & Engineering)
♦ Historic Joinery of the Midwest
  Rick Collins (History & Tradition)
♦ New Perspectives on Scribed Log Timber Framing:
  The Moosilauke Ravine Lodge*
  Adam Miller & Ariel Schecter (Skill & Craftsmanship)
♦ A Bucket of Opportunity: How One Company went from Catastrophic Building Failure to the First Complete CLT Heavy Timber Building, with Wood Fiber Insulation, in NY
  Jonathan Orpin ( Tradition Meets Innovation)
SATURDAY, MAY 20 cont’d

11:30 a.m.—12:00 p.m.  Lunch
12:30 p.m.—1:45 p.m.  Courses
   ♦ Timber Just Needs to Move:
      Compliant SIP Joinery & Timber Shrinkage
      Paul Malko (Building Science & Engineering)
   ♦ Historic Fabric & Reversibility vs. Insulation & Air Sealing in
      Antique Timber Frame Structures*
      Mason Lord (History & Tradition)
   ♦ Architecture as Craft*
      Robin Johnson (Skill & Craftsmanship)
   ♦ Envisioning Evolution: Alternative Paths to Success in Timber
      Framing
      Autumn Peterson, Ariel Schecter, Stephen Morrison, Matt Hunter,
      Christian Gudmand (Tradition Meets Innovation)
2:00 p.m.—3:00 p.m.  Courses
   ♦ The Fungus Among Us*
      Cheryl Ciecko (Building Science & Engineering)
   ♦ Community Building Projects
      Jeff Arvin & Gerald David (History & Tradition)
   ♦ Non-Petroleum Insulation System for Cold Climate Construction*
      Lou Host-Jablonski (Skill & Craftsmanship)
   ♦ Estimating
      Rick Collins (Tradition Meets Innovation)
3:00 p.m.—3:30 p.m.  Break—Bookstore & Trade Show Open
   (Bookstore sponsored by Heritage Natural Finishes)
3:30 p.m.—4:45 p.m.  Courses
   ♦ Photogrammetry for Documentation of Existing Structures*
      Andrea Warchaizer (Building Science & Engineering)
   ♦ A Photographic History of Barn Raisings
      Dan Troth (History & Tradition)
   ♦ Teaching Architecture Through Timber Framing*
      Sam Marts, Robert Foulkes, Robin Johnson
      (Skill & Craftsmanship)
   ♦ Drawing on Emptiness
      Peter Fraterdeus (Tradition Meets Innovation)
4:45 p.m.—6:30 p.m.  Trade Show Mixer
6:30 p.m.—7:30 p.m.  Dinner
7:30 p.m.—10:00 p.m.  TFG Benefit Auction
Agenda At-A-Glance
Sessions with a * are AIA-approved

SUNDAY, MAY 21
Agenda Subject to Change

7:00 a.m.—8:00 a.m.  Breakfast
8:00 a.m.—9:15 a.m.  Courses

- Working with Finishes for Timber Frame Structures
  Autumn Peterson (Building Science & Engineering)
- Historic Preservation vs. Adaptive Reuse:
  Case Studies in the Semantics of Preservation
  Michael Cuba (History & Tradition)
- The Workshop Roof: One Mathematical Solution*
  Curtis Milton & Gerald David (Skill & Craftsmanship)
- Traditional & Modern Thatching
  Thomas Gerner & Magnus Frimer-Larsen (Tradition Meets Innovation)

9:30 a.m.—10:30 a.m.  Courses

- Engineered Connections in Modern West Coast Timber Framing
  Willis Rozycki (Building Science & Engineering)
- Wisconsin’s Traditional Building Materials & Methods
  Jim Draeger (History & Tradition)
- The Workshop Roof: One Mathematical Solution (cont’d)*
  Curtis Milton & Gerald David (Skill & Craftsmanship)
- Tales from an Itinerant Timber Framer
  Arvel Aldridge (Tradition Meets Innovation)

10:30 a.m.—11:00 a.m.  Break—Bookstore & Trade Show Open
(Bookstore sponsored by Heritage Natural Finishes)

11:00 a.m.—12:30 p.m.  FEATURED PANEL: Getting Better at Getting Better*
Tedd Benson, Kevin Bittenbender, & Andrew Dey
(Sponsored by Timberlinx)

12:30 p.m.—1:30 p.m.  Lunch

1:30 p.m.—2:30 p.m.  Courses

- Panel: Why Trees are Stronger than Wood*
  Michaela Harms, Derek Mayhew, & Robert Mini
  (Building Science & Engineering)
- What Can I Do With My Barn? (And Other IEDs in the Form of a Question)*
  Charles Bultman (History & Tradition)
- Timber Frame Design Using SketchUp
  Clark Bremer (Skill & Craftsmanship)
- TFG Companies: The Craft of Business and AIA Certification
  Jonathan Orpin & Jeff Arvin (Tradition Meets Innovation)

2:30 p.m.—3:00 p.m.  Break—Bookstore & Trade Show Open
(Bookstore sponsored by Heritage Natural Finishes)
SUNDAY, MAY 21 cont’d

Agenda Subject to Change

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<tbody>
<tr>
<td>3:00 p.m.—4:00 p.m.</td>
<td>Courses:&lt;br&gt;♦ Strength and Stiffness in a Seismic Event: Fundamentals &amp; Demonstration*&lt;br&gt;  Dick Schmidt &amp; Joe Miller (Building Science &amp; Engineering)&lt;br&gt;♦ Thatching Demonstration&lt;br&gt;  Thomas Gerner &amp; Magnus Frimer-Larsen (Skill &amp; Craftsmanship)&lt;br&gt;♦ A Walking Bridge&lt;br&gt;  Richard La Trobe-Bateman ( Tradition Meets Innovation)</td>
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<tr>
<td>4:00 p.m.—5:00 p.m.</td>
<td>Bent Busting (Pavilion)&lt;br&gt;Thatching Demo (Pavilion)&lt;br&gt;Bridge Walk (Pavilion)&lt;br&gt;Tool Sharpening (Mendota)</td>
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<td>5:00 p.m.—6:30 p.m.</td>
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MONDAY, MAY 22

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<td>Breakfast</td>
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<tr>
<td>8:00 a.m.—9:15 a.m.</td>
<td>Courses:&lt;br&gt;♦ Net Zero Energy*&lt;br&gt;  Shilpa Sankaran (Building Science &amp; Engineering)&lt;br&gt;♦ Timber Framed Building in Norway: History, Usage, &amp; Tradition&lt;br&gt;  Trond Oalann (History &amp; Tradition)&lt;br&gt;♦ Natural Building Materials*&lt;br&gt;  Tim Krahn &amp; Kris Dick (Skill &amp; Craftsmanship)&lt;br&gt;♦ Traditional Craft Skills &amp; Current Agricultural Developments: A Fruitful Marriage&lt;br&gt;  Jonathan Kline &amp; Jack Gesmundo ( Tradition Meets Innovation)</td>
</tr>
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<td>Break</td>
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<td>9:30 a.m.—11:00 a.m.</td>
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</tr>
<tr>
<td>11:00 a.m.—11:15 a.m.</td>
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TFG SPECIAL EVENT: A CHILDREN'S WORKSHOP

Trillium Dell Timberworks and the Timber Framers Guild invite you and your children to take part in a TFG Children's Workshop at the Annual Conference.

Children will work with experienced carpenters and craftsmen from Trillium Dell Timberworks and the Guild to build a mortise and tenon playground set. And as a lasting memento from the event, they will get to build a toolbox to take home at the end of the workshop. Additional sponsors include TFG members Rocky Mountain Joinery and Heritage Natural Finishes.

Two sessions of the workshop will be offered: Saturday, May 20, and Sunday, May 21. All workshop activities will take place at the Conference venue. A parent or guardian must be accessible during the session in case of emergency.

Session 1 will take place Saturday, May 20th from 9 am - 5 pm
Session 2 will take place Sunday, May 21st from 9 am - 5 pm
FEATURED PRESENTATIONS

GERALD EPP - New Ways to Frame Timber  
Saturday, May 20  
8:30 a.m. - 9:30 a.m.

Timber framing is an old craft, and ingenious historical methods have been devised to connect the timber members in efficient and beautiful ways. Now that modern architecture is looking to stretch what wood can do in terms of both spans and applications, there is a new demand on engineers and builders to make these expectations possible, especially competing with stronger and more durable steel and concrete.

This presentation will give you a glimpse into one man’s exploration of what is possible when higher demands are placed on timber, taking you through a variety of modern, long span architectural structures, and how they were designed and built with efficiency in mind. This will include all the practical details of connection, fabrication, erection, and how to enhance durability.

PANEL: Getting Better at Getting Better  
Sunday, May 21  
Tedd Benson, Kevin Bittenbender, & Andrew Dey  
11:00 a.m. – 12:30 p.m.

When compared with conventional, code-built homes, the builders of high-performance homes are at an economic disadvantage right out of the gate. These homes tend to cost more because builders use high-quality materials and craft them into complex assemblies that require uncommon care, knowledge, and precision to execute successfully. In order to increase competitiveness in the marketplace, therefore, it’s essential that inefficiency and waste in the building process be minimized. Towards that goal, we need to be better in every way, achieving both a higher quality product and a more streamlined process. One methodology that our companies have found to be particularly effective is Lean thinking.

In this session, we will present a brief history of Lean thinking and its application to the construction industry; a number of “real world” examples of implementing Lean in our shop, our office, and on-site; and a look at the challenges of establishing and strengthening a culture of continuous improvement.

STEVE THOMAS – Building Green on the Pale Blue Dot  
Monday, May 22  
Sponsored by Hochstetler Milling, Ltd.  
9:30 a.m. - 11:00 a.m.

In 1990, when the Voyager spacecraft took a picture of Earth from 4 billion miles in space, the image was a tiny speck of life in the vacuum of space, what astronomer Carl Sagan calls the “pale blue dot.” Steve Thomas has seen much of this dot as a blue-water sailor in the 1970’s, host, writer, and producer of The Last Navigator book and film in the ‘80s, and in his television programs This Old House (PBS), Renovation Nation (Discovery/Planet Green), and Save Our History (History Channel), and others thereafter.

In this richly illustrated and fast-paced talk, Steve takes the audience with him on his documentary and television projects with the “Star Path” navigators of Satawal Island in the Pacific, the Eskimos of the Alaskan Arctic, WWII vets in the Aleutians, and Habitat for Humanity builds from Detroit to Kenya. Along the way, he takes us through his own building and renovation projects from his 1700s historical home in Salem, Massachusetts, to a “green” timber frame barn built on an island in Maine ... featuring some familiar faces from the Timber Framers Guild!

The “business” core of the talk is a clear, straightforward, and concise explanation of what sustainable, or “green,” building really means; who demographically is building green and what motivates them to do so; and why green building, scaled up, is a major driver of positive change for the planet. For timber frame builders looking to articulate the value proposition of their craft in their marketplace, this will be a useful part of the presentation. Being an honorary member of the Guild, Steve is happy to do what he can to advance the cause.

Steve says, “Years ago during the Concord Barn project I asked the question, ‘So, who ARE timber framers?’ One of the answers came back from the inimitable Ben Brungraber who posed this answer: ‘A pretty disparate group. About the only common denominator seems to be their being married to better women than they deserve.’ I am looking forward to discovering whether it still holds true, and for both sexes! And, really looking forward to seeing you all again in Madison.”
How Timber Framers Talk to Designers  
Sam Marts & Robert Foulkes  
Saturday, May 20  
10:00 a.m. – 11:30 a.m.

This roundtable discussion will focus on the design process and how architects determine when the structural method is chosen. The role of the timber frame builder in this process will be covered, as well as allocation of control – when does the type of structure (timber frame) dictate design elements, and how does the client or architect work within that framework.

Additional discussion will identify and center around the challenges of altering design later in the game.

Timber Just Needs to Move: Compliant SIP Joinery & Timber Shrinkage  
Paul Malko  
Saturday, May 20  
12:30 p.m. – 1:45

Timber frames make spectacular buildings, but the building envelope and other building components and systems have to be adjusted for the idiosyncrasies of timber framing. By using compliant joinery at strategic points in the envelope, unintended movement and cosmetic flaws can be eliminated while durability and energy performance can be maintained.

Green timbers will shrink, and big green timbers will shrink a lot. Since they will shrink, whether we want them to or not, it’s better to design the envelope (SIPs, stick-framed, or otherwise) to accommodate this movement rather than fight it or ignore it. The first recognition is not of absolute movement, but of relative movement. If the whole roof system drops down as a unit as the rafters shrink, everything is fine, except where the roof meets the rigid wall. Walls need room at the corners to allow the corner posts to shrink.

Second, the structural design must not be violated. There have been cases where, because timber shrinkage wasn’t addressed, the rafters were lifted out of their housings by the roof panel bearing on the top edge of the wall panel. A change in load path like this can cause the panel or timber to be overloaded. Also, the structure requires that lateral loads be transferred from roof diaphragm to wall diaphragm to foundation. These loads can be passed around the compliant joinery via the timber, if the timber frame is designed with this in mind.

Finally, the most likely result of unintentional movement is cosmetic problems, cracked drywall, sticking doors, and air leakage that wastes energy and can cause moisture damage requiring very expensive repairs.

The thesis of this presentation is that it’s better to look at the building structure holistically and intentionally handle these interactions.

The Fungus Among Us: Toxic Mold, Moisture, & Dwelling Well  
Cheryl Ciecko  
Saturday, May 20  
2:00 p.m. – 3:00 p.m.

There is no doubt that human exposure to a variety of toxins is increasing. Often misunderstood, toxic mold affecting homes, offices, schools, and even healthcare centers, is potentially the “asbestos” of the 21st century. An unintended consequence of the sustainability movement, the increasing incidence of mold in buildings of every type and material is related to trapped water accumulation. Separating fact from myth requires attention to details often overlooked. Attention to moisture management is important not only for wood, but also concrete, masonry, and even steel structures.

This program brings awareness, practical advice, and solutions to find, remove, and avoid mold and moisture damage. Science-based resources provide the basis for further analysis of strategies and solutions. By addressing the root cause of mold, which is moisture accumulation regardless of building material, building professionals and building owners can minimize health risks. The presenter began her research and journey of awareness when her own family became ill. This program is valuable for anyone concerned about chronic health challenges.
Documenting an existing structure can be an exacting and time-consuming process, and is often fraught with difficulty. Parts of a structure may be inaccessible for direct measurement; roof pitches may have slumped over time, and walls may be out of plumb. In the case of a building that is no longer standing, photos may be the only way to measure and analyze the structure.

We will survey available photogrammetry software (including SketchUp’s Photo Match feature), review best practices for photo documentation, and walk through test cases. We will also discuss how photogrammetry software can be used to generate a “point cloud” model of architectural details such as carvings, for documentation and reproduction.

**Working with Finishes for Timber Frame Structures**

*Autumn Peterson*

Sunday, May 21

8:00 a.m. – 9:15 a.m.

We’re going to pack in everything you need to know about timber finishing in 75 minutes! I will cover the variety of types of finishes that you may encounter (water based finishes, polyurethanes, oils, etc.), how to work with each of them, what are the best types of finishes for long term preservation, the importance of end/joinery sealing and working with pigments and stains. I’ll spend a healthy chunk of time answering questions that you may have or helping you problem solve certain situations that you are facing on your project. Then we’ll go outside and play with different finishes and stains on some timber scraps so you can get the feel for what’s out there and how different types of finishes look and feel to work with.

**Engineered Connections in Modern West Coast Timber Framing**

*Willis Rozycki*

Sunday, May 21

9:30 a.m. – 10:30 a.m.

The goal of this session is to help attendees understand why engineered connectors are used, and when and how. Willis Rozycki will also offer the perspective of a carpenter/builder who uses these connectors on a regular basis, both in the field as well as during the cutting process in the shop. He will share his experiences integrating modern connections with traditional joinery and timber framing in general.

**Panel: Why Trees Are Stronger Than Wood**

*Michaela Harms, Derek Mayhew, & Robert Mini*

Sunday, May 21

1:30 p.m. – 2:30 p.m.

Building with whole trees too small to be milled (small-diameter round timber) is a sustainable, cost-effective alternative to steel and concrete products. This presentation draws on material science, along with examples of round- and mass-timber construction, to demonstrate the competitiveness of round timbers in load capacity, bending strength, fire rating, and life-cycle performance. The course also shares information on the declining health of forests and lessons learned from managing a 134-acre FSC sustainable forest and learning lab. Incorporating SDRT, a byproduct of responsible forest management, into commercial construction will have a restorative impact on communities and the built environment.

**Strength and Stiffness in a Seismic Event: Fundamentals & Demonstration**

*Dick Schmidt & Joe Miller*

Sunday, May 21

3:00 p.m. – 5:00 p.m.

The Timber Frame Engineering Council is currently sponsoring a research project on the seismic-load behavior of traditional, stand-alone timber frames (those without shear walls or other lateral load carrying components). This presentation will include a discussion of basic considerations for structural design to resist seismic loadings, and it will feature full-scale testing of two sample timber frames that rely solely on pegged knee-braces to resist the cyclic racking deformations representative of a seismic event.

Our intention is to test two full-size bents that will be mounted within a loading frame on a flat-bed trailer. The presentation is intended to be informative to timber-frame carpenters, designers and engineers. Audience members should be interested in this presentation because it represents new information developed from current research regarding the structural behavior of timber frames. Seismic load behavior is not well understood by most timber frame carpenters and
designers. Structural engineers understand the fundamental principles, but will be interested in observing behavior of the demonstration specimens and seeing actual hysteresis curves demonstrating the ductility, or lack thereof, of these structures.

Net Zero Energy
Shilpa Sankaran
8:00 a.m. – 9:00 a.m.
Monday, May 22
The structural excellence of a timber framed building is naturally complemented by a high performance building envelope. The Net-Zero Energy Coalition’s latest report on residential zero energy in Canada and the United States has found dramatic growth of this high performance standard, and signs of a growing market. Zero net energy seeds initially sown in California and the Northeast are finding fertile ground throughout the US. Zero energy and zero carbon building sector goals and mandates are popping up all over. This workshop will provide an update on the growth in zero-energy residential construction throughout North America and insights on the future. We will cover the basic ingredients of zero-energy homes as well as project examples.

**HISTORY & TRADITION**

Historic Joinery of the Midwest
Rick Collins
10:00 a.m. – 11:30 a.m.
Saturday, May 20
Settlement of the Midwest began in the late 17th century by the French, along the Mississippi River, mostly by coming up, and settling along, the Mississippi River from New Orleans. The buildings they constructed remained stylistically consistent during the period from 1690 to 1810.

Around 1810, the Americans came from the East and brought their own style of building, which continued until about 1860, although waves of new immigrants came to the Midwest over the course of the 1840s from Scandinavia, central Europe, England, Eastern Europe, and Italy. These new immigrants became a much larger portion of the population than the Americans and traditional frames were often built, especially by German and Polish peoples. Often the American style was imitated, but the frame typology or layout methods were from the builder’s country of origin. By the late 19th century most timber frames had become homogenous with the American styles of framing, though I have found holdouts to original methods and styles up until the 1930s.

Cordwood, Fachwerk, piece en piece, Scandinavian log buildings, stave log, vertical log, and others were side-by-side with the classic American square rule canted queen post. Due to the proximity to the Great Lakes, timber frames were not only built by house carpenters but ship carpenters as well.

My presentation will be a discussion of the beginning and final days of timber framing in the Midwest, a period that began in the late 17th century and lasted until the late 1930s, until the revival of timber framing by locals in the 1970s. I will include a presentation of photos of not only our work but the work of others. Over the last 25 years I have had the privilege of working on thousands of buildings (mostly timber frame and log buildings), sometimes as a consultant to fill in on restorations and general contracting of those projects, from dismantles to in situ projects.

Historic Fabric & Reversibility vs. Insulation & Air Sealing in Timber Frame Structures
Mason Lord
12:30 p.m. – 1:45 p.m.
Saturday, May 20
The importance of historic fabric and reversibility in antique timber-frame structures (historic preservation) can be at odds with the insulation and air-sealing goals of the contemporary timber frame structure (high-performance and efficiency). This talk will explore why the historic preservation folks have good reason to be hysterical and the high-performance folks have a right to be frustrated, and the difficulties of reconciling these opposing sides of renovation planning. If there is a middle ground, what is it? What are the compromises in strategy that will bring more energy efficiency without jeopardizing the long-term health and architectural details of the structure?

Stewards of buildings that have survived 150 years or more strive to maintain the architectural details and not compromise the structural integrity. These stewards tend to take a conservative approach, which often means doing nothing to improve
comfort and energy efficiency. Energy efficiency advocates argue that part of what will allow a building to survive another 150 years is to bring them into the twenty-first century and meet the expectations of today’s homeowners. It is our job as designers and builders to guide our clients to the best solutions of today, without long-term risks to a building’s heritage, and to do so in a cost-effective way.

The presentation will review building science and how it drives the design and engineering of renovation projects. The tactics of hybrid systems of insulation will also be explored.

Community Building Projects
Jeff Arvin & Gerald David
Saturday, May 20
2:00 p.m. – 3:00 p.m.

Community Building Projects (CBPs) are the sweet spot where all aspects of the TFG mission converge. We practice our craft, we teach our craft, and we promote our craft.

Since the first one in 1989, the Timber Framers Guild has completed nearly 80 projects where instructors, students and volunteers collaborated to create memorable timber frame structures. Our projects are in the US, Canada, Suriname, and Poland, and they include bridges, picnic shelters, market pavilions, school buildings, and museum pieces. Projects may be new construction or historical restoration. Guild members and volunteers provide the labor and in turn, receive new skills and knowledge about timber framing. The communities we partner with receive a beautiful, lasting structure with a story.

In this presentation we will take a look at how CBPs come to be, and how they are organized and managed.

A Photographic History of Barn Raisings
Dan Troth
Saturday, May 20
3:30 p.m. – 4:45 p.m.

As the family farm’s most important structure, the raising of the barn was the most seminal moment in its history. As the pioneers settled new lands, communities formed and gathered together to help raise barns at “raising bees.” When the barn frame was successfully erected, men, women, and children of all ages gathered to celebrate the occasion and remember it with a photo. We will explore photos of raised barns as well as photos of barns in the process of being raised.

We often stand in old barns admiring their heavy timbers and marvel at the fact that they were raised by hand. We’ve seen some photos of some raising bees, and know how some barns were raised, but are often left with questions like “how did they do that?” Hopefully, this pictorial history, along with a lively discussion will leave us all with more answers, a greater understanding, and a greater appreciation of what farm communities accomplished.

Historic Preservation vs. Adaptive Reuse: Case Studies in the Semantics of Preservation
Michael Cuba
Sunday, May 21
8:00 a.m. – 9:15 a.m.

This session will examine the nuances of descriptive terminology used in the field of conservation of timber framed structures. Using the definitions provided by the Secretary of the Interior’s Standards for Historic Preservation as our guide, we will explore the distinctions of these terms through case studies.

Many terms common to the field of historic preservation are often used interchangeably in our everyday communication. Confusion among professionals about the distinctions of these terms can perpetuate misunderstanding both within the industry and among clients. We will explore several examples of projects relating to working with old frames. Some will be clearer than others as to where they fall on the spectrum. We will also discuss variations between the United States and the United Kingdom in defining the scope, values, and context of our evolving lexicon of architectural conservation.

As always, I welcome others to submit their own examples for scrutiny and discussion. Be prepared for a raucous good time!
Jim Draeger

9:30 a.m. – 10:30 a.m.

The pioneer architecture of Wisconsin is a blend of technology, geography, and ethnicity. Wisconsin ethnic settlers exploited different geological formations and forest cover resulting in regionally distinct architecture. Various settlers adapted local building materials to their particular ethnic building skills and traditions. This presentation will explore the various methods of log and timber frame construction used in the state’s settlement buildings from the 1820s to 1870s.

What Can I Do With My Barn? (And Other IEDs in the Form of a Question)

Sunday, May 21

Charles Bultman

1:30 p.m. – 2:30 p.m.

Invoking preservation and agricultural heritage, barns are being re-imagined as gathering places for commerce and celebration, frequently without an understanding of the regulations that affect that vision. This presentation will explore the issues of converting barns to new uses in the 21st century, including the impact of zoning and building codes, choices of materials and tactics, and the risks that might be associated with those choices.

Building codes have been around for a long time. And for most of that time they were ethically driven. We built well because we should take care of each other. And if we did not there would be consequences.

However, our building codes have morphed from doing things well, to specifically how to build. That is, codes became prescriptive. Today you basically tell the code what you want to build, and it tells you all of the limits of materials and occupancy as well as height and area. And this is true for all types of buildings...except one.

In most states all buildings are regulated by our building code, except agricultural buildings on farms. This was a decision that made sense - in the 19th century. Barns were stout structures that were manipulated by farmers to accommodate their needs and had more in common with machines than buildings. Today though, the barn and the farm is at the center of a quietly growing agri-tourism industry consciously looking to bring people to the farm for events.

The discussion will include examples of successful and unsuccessful conversations, how different states are handling this question, and an open discussion of examples attendees may know about. The talk is directed to barn owners mulling a conversion, timber framers who will be asked to implement the conversion, and architects and engineers contributing to the process.

Timber Framed Building in Norway: History, Usage, & Tradition

Monday, May 22

Trond Oalann

8:00 a.m. – 9:15 a.m.

People have lived in Norway in for about 11,000 years. Agriculture began in the late Stone Age, approximately 4000 years ago, and it is assumed that the first wooden buildings were built at this time. The oldest archaeological evidence of wooden buildings are posts from longhouses from about 1800 BC. Stav churches dating to the early 1100s are the oldest existing timber framed structures in Norway. The oldest intact non-ecclesiastical post building is the Finnesloftet in Voss from 1295.

Norway’s timber framed barn tradition shares a common heritage with the rest of Europe. The earliest existing barns from 1500-1650 share similar features: three bays, passage through the middle bay, and posts sitting directly on stone rather than a sill. Many of the barns have symbols carved into the posts. It is believed these were meant to protect from witches and other imagined evil. These early barns were simply designed for easy access with crops and space for threshing and storage of grain and hay. By 1800 barns took on more uses and the “unit barn” or all-under-one-roof barn developed. Barn development continued when the first agronomist began his career in 1860.

Twenty distinct timber frame styles are found in Norway. These developed from a combination of local innovation, regional conditions and materials, and outside contact, as well as changes in agricultural practices. A sampling of these styles will be shown at the end of the presentation as well as some Icelandic frames that exhibit early Norwegian construction techniques used well into the 20th century.
SKILL & CRAFTSMANSHIP

New Perspectives on Scribed Log Timber Framing: The Moosilauke Ravine Lodge
Adam Miller & Ariel Schecter
Saturday, May 20
10:00 a.m. – 11:30 a.m.

In 1938, the Moosilauke Ravine Lodge was built with great enthusiasm by the Dartmouth College Outdoor Club. After 75 years, the beloved log building was deemed beyond reasonable repair and in need of replacement. After providing consultation throughout the design process, the Wooden House Company was awarded the contract to fabricate the log timber frame for the new structure.

Challenging the boundaries between timber framing and log building, the frame for the new 11,000 square foot Lodge features numerous innovative elements of structural joinery and approaches to fabrication.

This presentation will feature a slide show of the year long process from procuring logs in the woodlot to installation of the completed frame. Commentary and discussion will focus on the following topics:

• sourcing and preparation of materials
• round-to-round joinery with both vertical scribes up to 24” and an accurate system for horizontal bubble scribing
• full size layout on the scribing floor
• setup strategies and material handling for assemblies up to 10000 pounds and building a massive roof system upside down
• purpose designed connections to maximize the use of all wood joinery and minimize the need for steel reinforcement
• accommodating for shrinkage in large diameter log components
• working outside in all seasons and a winter raising on a mountain in New Hampshire

Architecture as Craft
Robin Johnson
Saturday, May 20
12:30 p.m. – 1:45 p.m.

In January of 2016 and 2017, with support from the Michigan Barn Preservation Network and the National Barn Alliance, students in Andrew University’s “Architecture as Craft” program experienced one of the best teaching tools for empirical learning: working directly with scale replicas of timber framed barns. The 1848 3-bay pitched-purlin Midwest Barn and the 4-bay Dutch barn taught students construction sequencing and post and beam structural systems, and gave them an introduction to the craft of timber framing and American vernacular timber frame barns.

Assembled and disassembled multiple times within an afternoon, the models helped the students accelerate their understanding of structure – faster than previously seen in the 12 years of the architecture program. The barn models encourage a quick uptake on how timber frame structure works: how tenons on both ends of a brace and require an open joint to be installed; how different wood species are efficiently employed; and how large American barns were (and are) put together with careful teamwork among the builders.

Timber framing is a perfect transition from the conventional 2x wood construction introduced early in the program to the post and beam structures of steel and concrete introduced in the third year. The whole package – barn and lectures – are fast becoming an indispensable part of Andrews University’s “Architecture as Craft” studio, which this session will review and discuss.

Non-Petroleum Insulation System for Cold Climate Construction
Lou Host-Jablonski
Saturday, May 20
2:00 p.m. – 3:00 p.m.

This presentation will present designers and builders with an overview of a viable, non-petroleum-based wall insulation option for timber-framed and light-framed buildings. Recent advances in creating low-density LSC has been proven for high performance home design and construction for the Upper Midwest and cold climates. Properly installed, the technology is builder-friendly, resource-efficient, naturally mold, mildew, pest-resistant, and energy efficient. Recent research in the lab and on the jobsite have advanced Light Straw-Clay (LSC), a centuries-old building technology, to meet modern construction practices and code requirements.
The presentation will include photos of projects under construction, video clips of the fabrication and installation process, a to-scale wall mockup, and samples of materials.

- Topics to be covered are:
  - LSC myths presented and de-bunked
  - Integration of advanced framing systems with straw-clay infill: designing to reduce labor
  - New laboratory test data establishes the link between LSC density and R-value
  - LSC’s role in passive solar heating and cooling design: thermal mass vs. R-value
  - New onsite fabrication equipment and process options
  - Overview of LSC strategies for wind bracing and detailing for air-sealing
  - Introduction to the re-written and improved IRC Appendix R and Commentary for LSC construction soon to be released for 2018

In addition, the user-friendly character inherent in this construction technology provides community-building opportunities. The presentation will describe how this aspect is a marketing advantage that can be readily manageable by savvy builders, and can fit smoothly into the workflow of a construction schedule.

**Teaching Architecture Through Timber Framing**

Sam Marts, Robert Foulkes, & Robin Johnson

3:30 p.m. – 4:45 p.m.  
Saturday, May 20

Architecture students need to develop a broad range of skills, from understanding material properties to building codes to urban planning to loads and stresses, and more. The panelists are using timber frame buildings as a first step in understanding materials, allowing all issues to be evident and exposed. Concrete and steel have replaced wood as the assumed medium that students will encounter in their careers. However, heavy wood construction is a simple way examine core structural issues: dead loads, live loads, snow loads, wind loads, and much more. The panel members have years of experience using designs as the basis for educating new architecture students, and will discuss why and how they do this.

**The Workshop Roof: One Mathematical Solution**

Curtis Milton & Gerald David

8:00 a.m. – 10:30 a.m.  
Sunday, May 21

This presentation is based on the two-day pre-conference workshop led by Gerald David, and will leverage the exercises and examples from that workshop; pre-printed folding models will be available for attendees to take home.

After a brief review of the graphic methods developed during pre-conference roof workshop, we will discuss and develop the calculator skills needed to work through the two-dimensional mathematical exercises. We will then reinforce the three-dimensional information required to determine the lengths and right triangles that define the angles expressed in the graphic solutions using any calculator or phone app with three memories. Any calculator that can deliver three or more decimal places will do the work; the speed of work will vary. Reinforcing the basic mantra of “stay in plan as long as you can,” we will focus on the underlying math known as trigonometry without actually using that tool set (even if your calculator does).

To maximize learning, attendees should have a conversational vocabulary of roof framing. Participants should have a good working knowledge of his/her favorite calculator or application. A learner with no roof calculation or cutting experience is encouraged to review Will Beemer’s “When Roofs Collide: A Graphical Solution for Roof Framing Geometry.” Advanced learners will likely take away some new information but can contribute personal tips and tricks in real time.

**Timber Frame Design Using SketchUp**

Clark Bremer

1:30 p.m. – 2:30 p.m.  
Sunday, May 21

Sketchup is a 3D CAD program available for free, and is very well-suited for modeling timber frame designs in 3D. These are great for demonstrating the design to clients, and for estimating costs. But it’s also flexible and accurate enough to use for joinery design and creating shop drawings directly from your whole-frame models. Using custom extensions for Sketchup designed specifically for timber framers (by the presenter), you can create timber frame models that can be used to automatically generate precise shop drawings.
Both timbers and joints are represented as Sketchup components. Successful use of this system will require the user to build up a library of these components that represent the user’s own joinery style. In this session, we will use the presenter’s library to build a sample timber frame, including joinery. We will also demonstrate how to make your own timbers from scratch using existing joinery components, and finally, creating joinery components from scratch.

The custom extensions also create timber lists for the models, which can be used to derive material lists and project checklists, for example. The timber frame-specific extensions are available at no charge from the presenter. A 20-page color manual is also available from the TFG (proceeds go to the Guild).

**Thatching Demonstration**

*Sunday, May 21*

*Thomas Gerner & Magnus Frimer-Larsen*

3:00 p.m. – 5:00 p.m.

In Europe, thatching is having a renaissance because of a very good environmental and sustainability profile. Today, thatchers are working with architects and developers to make it the preferred roof of the future. The modern thatched roof is fireproof, long-lasting (50 years), and offers almost unlimited possibilities in application.

The first part of the presentation will focus on the thatching technique, from its historic roots to its modern form (the invention of the thatching screw in Denmark in the mid-1980s is a technical watershed). We will present and work with technical cross-section drawings and pictures of the thatching process. The demonstration later in the day will be a hands-on continuation of this part.

The second part will then focus on the recent developments in Europe, primarily the Netherlands, where architectural experiments and political breakthroughs (in fire regulations, mainly) have paved the way for a massive growth in the industry. This portion of the talk will contain a cavalcade of pictures from significant projects and inspire potential future use of thatched roofs in the United States.

**Tool Sharpening**

*Sunday, May 21*

*Leon Buckwalter*

4:00 – 5:00 p.m.

This presentation will cover general information on creating and maintaining sharp cutting edges on many of the tools commonly used in the craft of timber framing, such as chisels, axes, and various types of drill bits. We’ll talk about some of the many sharpening tools and accessories that are available. There will be a brief introduction to tool materials and factors which are damaging to their quality, and to the durability of cutting edges. We’ll discuss a critical aspect of rotating tool geometry, the necessity that surfaces other than cutting edges require a bit of clearance so they do not make contact with the workpiece, rubbing and creating tool-destroying heat. The removal of built-up pitch from tool surfaces will also be covered.

**Natural Building Materials**

*Monday, May 22*

*Tim Krahn & Kris Dick*

8:00 a.m. – 9:15 a.m.

Biosystems professor Kris Dick will present an overview of research at the University of Manitoba, followed by examples of practical applications by Tim Krahn. Materials covered include straw bale, light straw clay, hempcrete, rammed earth, compressed earth block, and, of course, timber.

Kris and Tim are partners in Building Alternatives Inc., a consulting engineering company practising in Canada.

Session outline:

1. Definition of Natural Building Materials
2. Research examples - Alternative Village, Queen’s University
• Rammed Earth/Straw Bale greenhouse (AV)
• Clay plasters (AV & Queen’s)
• Hempcrete (AV)
• Straw bale lab (AV)
• Straw bale panels (Queen’s)
• Thermal testing (AV & Queen’s)

3. Built examples
• Rammed earth residences: Hanson, Marks-Barker
• Straw bale panels: James Street, Ancaster
• Hempcrete: Wendover, Cold Springs (hybrid)
• Light straw clay: Roseau River

4. Permit challenges, design opportunities, resources
• Urban vs Rural jurisdictions
• Objective-based code system, adjudication
• ICC, Straw Bale appendix
• Earthen construction
• New Mexico earthen construction code
• New Zealand earthen construction code
• Design using parallel standards - i.e. Masonry for rammed earth or compressed earth block

TRADITION MEETS INNOVATION

A Bucket of Opportunity: How One Company went from Catastrophic Building Failure to the First Complete CLT Heavy Timber Building, with Wood Fiber Insulation, in NY

Saturday, May 20
Jonathan Orpin
10:00 a.m. – 11:30 a.m.

Jonathan Orpin will map the voyage from a catastrophic building failure in February 2015 to the first complete CLT building in New York State in May 2017. The goal of this seminar is twofold: to share the business aspects of catastrophe and rebuilding, and to continue the dialogue regarding the opportunity and place for timber framers in the coming tsunami of CLT construction, for those companies so inclined.

One Saturday night in late February 2015, Jonathan’s phone started ringing. A late snow had collapsed 10,000 feet of our fine woodworking shop, a post-WWII bow string truss building in western New York. 6,000 square feet remained standing. This seminar is the story of the collapse; the triage to keep going; the design and building with a hybrid of solid timbers, glulams, and cross laminated timbers (CLTs), insulated with wood fiber; and perhaps most importantly, how we used this opportunity to be better.

The first third of our time will be spent on the business end of this journey. We will review the insurance process, including what you should be considering when choosing both insurance and insurers.

The last two thirds of our time will be spent on our new building, into which we are just moving. Decisions on materials, structure, experimentation, and pricing all required deep dives in this relatively new but exciting building methodology. We then will walk through the construction sequencing and installations, using 3-d imagery and site photography for illustration.

Join the journey of: leadership, planning, dealing with insurance, re-configuring production space, designing new space, engineering, building with CLTs and heavy timber, sequencing, and installation.

Envisioning Evolution: Alternative Paths to Success in Timber Framing

Saturday, May 20
Panel: Christian Gudmand, Matt Hunter, Stephen Morrison, Autumn Peterson, Ariel Schecter
Michael Cuba (moderator)
12:30 p.m. – 1:45 p.m.

The current economic and regulatory environment presents both challenges and opportunities for those endeavoring to
run a business or make a career in timber framing. As an inherently creative group of craftspeople, many of us find that
tried-and-true formulas for prosperity in business don’t always fit our own visions of what it means to be successful. We
are looking for a conversation between folks who have been in the trade for several years and looking to plan for the
long-term career, whether it is starting a new business, changing a current business model or moving up in your current
employment.

This session will use a roundtable format to catalyze and facilitate discussion about roads less traveled in developing
careers and businesses in the timber framing industry today. We will discuss strategies; when and how to work with other
timber framing professionals; when to take risks and when to cut losses; how to find, train, and retain good employees;
and more. We are hopeful that attendees will participate and help to guide the direction of the discussion. Our goal is to
broaden the context in which we view opportunities to apply our creativity and grow sustainable businesses.

**Estimating**

*Saturday, May 20*

*2:00 p.m. – 3:00 p.m.*

Rick Collins

Estimating is one of the most difficult challenges to running a business. To be sure there are many challenges in business,
however they often require single skill aptitude - navigating insurance, various human resource tasks, budgeting, finance and
banking, and legal issues, to name a few. Estimating, however, requires that you understand all of these things well enough
to make good decisions about charging what you need to in order to survive and profit. This isn’t so much a session about
how to deliver an estimate, or how to work with established estimating software; instead, this class is about the nuts and
bolts of how you develop an estimate for your business. Estimating well and estimating quickly are what can make or break
your business in the short run or the over the long haul. Estimating is about projecting costs far into the future, it’s about
calculating volume and cash flow over the short and long term.

Estimating is about instinct; it’s about following your gut, wisdom, and learned experience; taking risks; and ultimately
defining who and what you are by honoring commitments made. If you are running software and doing estimates for
someone else, and you haven’t spent 10 years in the field learning the trade, this class is for you. If you are a buyer and
you want to better understand how timber framers develop your quote, then this class is for you. If you are an architect or
engineer and you need more information about what is often included in a timber frame estimate, then this class is for you
too. Whether you are starting out or have been in the business 20 years, and you are a small company or owner/operator,
this class is for you.

**Drawing on Emptiness**

*Saturday, May 20*

*3:30 p.m. – 4:45 p.m.*

Peter Fraterdeus

Emptiness is an ancient design pattern, going back thousands of years to Lao Tzu and his Tao De Chiing, and beyond. In
this hands-on session, we’ll engage in some mindful play with pencil, marker and notepads, in search of that paradoxical
“nothing” which enfolds all our figures and forms.

To better understand the importance of emptiness as a design pattern, we use techniques developed by Dr. Betty Edwards
in her best-selling Drawing on the Right Side of the Brain, as well as Zen exercises for confounding our rote approach to
looking without seeing. We will use simple accessible tools to approach the quiet space — paper, pencil, markers, and the
close observation of one’s own deliberate awareness.

This session is not just for visual artists or designers, but equally valuable in corporate and business environments. It will help
move the mind into “R-mode” (non-linear right brain), quieting the “L-mode” (linear left brain) and allowing us to address
creative projects with increased awareness of the larger context which is the relationship between the components. We gain
an enhanced, mindful appreciation of the dynamic relationship between figure and ground, in all manifestations.

Our practice will further examine the root of our marking and, indeed, of all our making—the visualization attention chain.
Picking up a tool, moving it across the page, lifting it away. Each requires a complex sequence of micro-decisions, each
moment, an application of intent and will. To examine this process deeply opens profound channels for mindful introspection.
All action, all speech, all innovation must follow these same patterns.
Traditional & Modern Thatching

Thomas Gerner & Magnus Frimer-Larsen

Sunday, May 21
8:00 a.m. – 9:15 a.m.

In Europe, thatching is having a renaissance because of a very good environmental and sustainability profile. Today, thatchers are working with architects and developers to make it the preferred roof of the future. The modern thatched roof is fireproof, long-lasting (50 years), and offers almost unlimited possibilities in application.

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Tales from an Itinerant Timber Framer

Arvel Aldridge

Sunday, May 21
9:30 a.m. – 10:30 a.m.

Running a full-blown timber framing business is a challenge. Finding clients, employees, materials, tooling, supporting technologies, estimating, contracts, etc., is often too daunting to tackle all at once when you are starting out. There is an alternative for the craftsperson who needs to experience and learn before diving in...and you can make a buck. The world of an itinerant carpenter/joiner is definitely not for everyone, but for some of us, it’s one of the best experiences that this trade can offer.

Arvel Aldridge will share his many experiences as an itinerant timber framer, along with tips for travel and work, challenges and opportunities, and much more.

TFG Companies: The Craft of Business and AIA Certification

Jonathan Orpin & Jeff Arvin

Sunday, May 21
1:30 p.m. – 2:30 p.m.

The Timber Framers Guild Company Committee will be offering a training on the new AIA Timber framing CEU presentation in this session for TFG Company members and prospective Company members. The unbiased, informational AIA presentation gives timber framers the opportunity to speak with architects at such forums as “Lunch & Learn,” where they can educate local architects on the timber framing craft, the role of timber framers in design and delivery of timber frame structures, their repair and renovation, and more.

To give the AIA-approved slide show, you are required to first go through this informal and reasonably quick training, and to represent the entire industry. Architects who attend your later presentation of this material will receive their needed AIA continuing education units (CEUs). Timber framers may also hand out their own company’s information, of course, and let the audience know of their capabilities and interests. All TFG Company members and staff can get this training in preparation for addressing architects as a benefit of TFG Company membership.

After the AIA training, we will be listening, sharing, and brainstorming as a group about the future of the timber frame industry, and its role within the Guild community. Plans are already in the works to offer regional one day “Business Boot Camps,” develop peer-to-peer networking groups, build a library of business document resources, and more. Please stay to share in this effort, or join the seminar about 30 minutes into the session (for those not interested in AIA presentation training).

This session is also an opportunity for those individuals considering company membership to become pre-certified in
delivering the AIA course, as well as learn more about TFG Companies.

**A Walking Bridge**

*Richard La Trobe-Bateman*  
Sunday, May 21  
3:00 p.m. – 5:00 p.m.

Richard La Trobe-Bateman has an international reputation for designing and building structures from chairs and tables to bridges of various sizes, and will be lending his talents to this year’s Timber Framers Guild 2017 Conference. Working hand-in-hand with the University of Wisconsin, the Guild will be raising this 90ft long piece of functioning art at the historic Edgewater Hotel.

This whimsical foot bridge, with all parts pre-made, will be raised using only traditional hand methods of gin-poles, scaffolding, and old school determination. Once completed this La Trobe-Bateman bridge will be dismantled and installed at a private location.

During his presentation, Mr. La Trobe-Bateman will show the results of personal development, with concern first to the appearance of designed objects; second, to the structure of objects; and third, to the building of objects. Viewed from the perspective of shape determining systems both technical and cerebral. All of these points are illustrated by the bridge being developed and raised at the conference.

**Traditional Craft Skills & Current Agricultural Developments: A Fruitful Marriage**  
*Jonathan Kline & Jack Gesmundo*  
Monday, May 22  
8:00 a.m. – 9:15 a.m.

Jonathan Kline and Jack Gesmundo will describe current efforts to provide training for farmers and craftsmen in the African countries where Tillers International works. They will discuss how traditional craft skills in blacksmithing and woodworking often become indispensable to accomplishing results in these settings. They will inspire you to consider a broader understanding of craftsmanship, one more inclusive than is typically encountered in most trade conversations.

Tillers International is a not-for-profit organization located in Scotts, Michigan, with a mission to preserve, study, and exchange skills and tools that empower communities worldwide to improve livelihoods and agricultural productivity. With over half of Africa’s population still living an agrarian lifestyle, often on small subsistence farms of just a few acres, Tillers provides animal traction skills that are readily accessible and able to genuinely improve agricultural output. These practices seek to enhance quality of life for current and future generations with techniques that improve the fertility of the soils. Tillers shares low-capital, public domain technologies, and in particular 19th century American farming tools and techniques, because of their utility and power to produce proven results in communities with less access to material technologies and having fewer available resources. The organization strives to inspire an attitude of experimentation in both farmers and the local craftsmen who make the necessary tools, since they are most knowledgeable about local conditions, needs, and capabilities. Traditional craft skills in blacksmithing and woodworking often become indispensable to accomplish results in these settings.
Arvel Aldridge, of New Melle, MO, has been involved with timber framing since attending a Cornerstones class in 1982. He started his career as an itinerant craftsman in 1988 to gain experience. His business’s projects have run the gamut from owner-builders, trimber framing, room additions, high-end residences, timber trusses, a winery, and an 8,000 sq. ft. dining hall for the Salvation Army. This has also been interspersed with occasional itinerant work for other companies. In 2008, he closed the doors to his timber framing business, but has continued to cherish the opportunity for itinerant work. His wife Barbara retired in 2013, and since then they’ve been traveling almost full-time, often as a fringe benefit of his work.

Presentation: Tales from an Itinerant Timber Framer (Sunday, May 21, 9:30 – 10:30 a.m.)

Jeff Arvin is the Executive Director of the Timber Framers Guild. In his own words: “I first learned about timber framing in an article Ed Levin wrote for Fine Woodworking. It was 1978. I thought, “That’s for me.” A year later I stumbled onto books by Tedd Benson and Stewart Elliott. Still another year further down the road I was living in southeast Michigan and heard an electrician talking about wiring a house made of wooden beams with pegs. Finding it nearly impossible to believe that anything as cool as a timber frame house could be growing up in my back yard, I had to check it out. The very next day, after inspecting the frame, I found my way to Blissfield, Michigan, where I met Frank and Brenda Baker and Sandy Bennett, who were in the start-up years of Riverbend Timber Framing. Little did I know that was the start of what is now a 30-plus-year relationship with big wood and the community of people who design and craft it.

“My timber framing experience—as an employee and a business owner; as a hands-on craftsman and as founder and owner of Cascade Joinery; as a member and a director of the Guild and the Timber Frame Business Council—is long and deep. Now, as executive director, I am in awe of the skilled, big hearted, intelligent people who make up the timber frame community, and am inspired to build this extraordinary organization to better serve them.”

Presentation: Community Building Projects (Saturday, May 20, 2:00 – 3:00 p.m.)
Presentation: TFG Companies: The Craft of Business and AIA Certification (Sunday, May 21, 1:30 – 2:30 p.m.)

Tedd Benson, the founder and President of Bensonwood (1973) and Unity Homes (2012), has devoted his life to developing a better way to build. A key figure in the revival of timber framing in America, Mr. Benson was a founder of the Timber Framers Guild (1984) and is author of four books on the subject. Bensonwood was launched with the mission to demonstrate how we can effectively build quality, lasting, and sustainable homes by embedding the process with disciplined craftsmanship, along with advanced technology, software, and manufacturing efficiency. After having spent time researching in Europe and Asia, he went on to found Unity Homes, coupling an innovative system of standardization with lean, quality, off-site construction, to make high performance homes affordable and normal. Mr. Benson is a nationally known speaker and presenter, and is the recipient of many awards, including an honorary doctorate from Unity College, and most recently, The Granite State Award, in recognition of his statewide and national influence on best building practices.

Featured Panel: Getting Better at Getting Better (Sunday, May 21, 11:00 a.m. – 12:30 p.m.)

Kevin Bittenbender is Company Steward and Head of Production at Bensonwood. After studying economics at Middlebury College and spending a few years as a carpenter, he joined Bensonwood. Passionate about working efficiently, Mr. Bittenbender has been actively incorporating Lean principles and practices into Bensonwood’s operations. From organizing training and facilitating events, to helping incorporate improvements on the shop floor, he has played an active role in pushing Lean forward in the constant challenge of reducing waste wherever possible. Along with being the Lean champion for Bensonwood, he is also the team leader for the Woodworking department and a Company Steward.

Featured Panel: Getting Better at Getting Better (Sunday, May 21, 11:00 a.m. – 12:30 p.m.)

Clark Bremer is a former professional timber framer from Minneapolis. He currently makes his living writing software, but finds time to lead and participate in timber framing workshops. He also teaches timber framing at North House Folk School, in Grand Marais, Minnesota. He enjoys inventing new tools for timber framing, both hardware and software.

Presentation: Timber Frame Design Using SketchUp (Sunday, May 21, 1:30 – 2:30 p.m.)
Leon Buckwalter has been a lifelong woodworker, long-time Guild member (since 1991), and is presently in his third term as a member of the Guild Board of Directors, upon which he previously served as Vice-President. He owned and operated Ischua Valley Timber Frames in western New York for many years before accepting a position at Alfred State College's vocational campus as Director of the Historic Restoration & Renovation Institute, and Associate Professor in the Building Trades Department. He recently left academia to return to work in the field, specializing in the restoration, and sometimes recreation, of historic structures both timber framed and those constructed of logs. He has participated in, and instructed at, numerous Guild projects over the years, and traveled as far as Russia and Poland to find projects of interest. Mr. Buckwalter also sits on the Board of Directors of the New York State Barn Coalition and on the Hinsdale (NY) Planning Board.

**Presentation: Tool Sharpening Demonstration (Sunday, May 21, 4:00 – 5:00 p.m.)**

Charles Bultman is an architect with experience in construction, education, and photography, along with architecture and historic preservation. For the last eighteen years, Mr. Bultman's practice included rehabilitating and converting unwanted timber framed structures, working with more than forty antique barns in the process. Many are houses; others are offices, restaurants, and artist studios. Some are still barns, even. Mr. Bultman is the vice-president of the National Barn Alliance, serves on the Michigan Barn Preservation Network’s Technical Advisory Committee, and is active with the Friends of Ohio Barns. He also serves on AIA Michigan’s Government Affairs Committee.

**Presentation: What Can I Do with My Barn? (And Other IEDs in the Form of a Question) (Sunday, May 21, 1:30 – 2:30 p.m.)**

Cheryl Ciecko is a thought leader, licensed architect, and educator with a passion for the art of building wellness. With extensive research and personal experience in building science, wood materials, innovative structural systems, and bio-toxins, she is the founder of the website AvoidingMold.com to raise awareness and offer technical support.

An active member of the Association of Licensed Architects, American Lumber Standards Committee, FPS Wood Design Focus Editorial Committee, and American Institute of Architects, Ms. Ciecko is also a LEED AP and former Senior Technical Director and Regional Director for WoodWorks. Her own home is a timber frame she designed and built in 2008.

**Presentation: The Fungus Among Us: Toxic Mold, Moisture, and Dwelling Well (Saturday, May 20, 2:00 – 3:00 p.m.)**

Rick Collins has been involved in the construction industry for 17 years, beginning as an enlisted Marine combat engineer. Over the last decade, he has grown Trillium Dell Timberworks through various iterations, and is now co-owner in a strong 16-person company. Between military service and business, he attended the University of Illinois and received a BS in Wood Science/Forestry. He has been an active member of the Timber Framers Guild for seven years and on the Board of Directors for the last four.

**Presentation: Historic Joinery of the Midwest (Saturday, May 20, 10:00 – 11:00 a.m.)**

**Presentation: Estimating (Saturday, May 20, 2:00 – 3:00 p.m.)**

Michael Cuba is a co-founder of Knobb Hill Joinery, a historic preservation company in northern Vermont focused on traditional restorative joinery techniques. He also runs Transom HPC, a small consulting firm offering dendrochronology coring services, research, and documentation for historic timbered structures. Michael is an active member of the Traditional Timber Frame Research Advisory Group and currently serves as a member of the Timber Framers Guild Board of Directors.

**Presentation: Historic Preservation vs. Adaptive Reuse: Case Studies in the Semantics of Preservation (Sunday, May 21, 8:00 – 9:15 a.m.)**

**Panel: Envisioning Evolution: Alternative Paths to Success in Timber Framing (moderator) (Saturday, May 20, 12:30 – 1:45 p.m.)**

Gerald David owns GFD Woodworking, LLC, a timber framing and restoration company that helps dedicated individuals preserve and enhance their homes. With a professional background steeped in tradition, Gerald has developed a keen sense and eye for the character of a building and its place.

Having lived in many countries and worked in many cultures, Gerald has both the experience and sensitivity that can reinvigorate any building and bring it back to past glory and make it work for modern needs. Preserving and adapting the built environment, and making it viable in a changing world spells conservation on many levels: historically, environmentally, and socially. By keeping and adapting our buildings we honor the generations that have made an effort before us and set an example for those to come.
Gerald believes that an inseparable part of working in the trades is the responsibility to educate the next generation. GFD Wood Working is committed to passing on knowledge both ‘on the job’ and in formalized courses.

Pre-Conference: Complex German Roof Framing Workshop (Thursday, May 19, & Friday, May 20, 8:00 a.m. – 5:00 p.m.)
Presentation: Community Building Projects (Saturday, May 20, 2:00 – 3:00 p.m.)
Presentation: The Workshop Roof: One Mathematical Solution (Sunday, May 21, 8:00 – 9:15 a.m.)

Andrew Dey is Operations Steward for Unity Homes. Unity Homes has had several “repeat clients” - homeowners for whom Bensonwood built years ago, and who returned to have a new home built by Unity. Mr. Dey is Unity’s first “repeat employee.” After graduating from Harvard, he worked as a contractor in Boston before joining Bensonwood in the mid-nineties. For thirteen years Mr. Dey provided leadership to the project management department and, as a company steward, to Bensonwood as a whole. After an eight-year hiatus during which he honed his building science, project management and leadership skills (and spent a year in Germany researching energy-efficient homebuilding), Mr. Dey returned to join the Unity Homes team where he wrangles day-to-day operations at the company.
Featured Panel: Getting Better at Getting Better (Sunday, May 21, 11:00 a.m. – 12:30 p.m.)

Kris Dick is a licensed engineer with degrees in civil and structural engineering. In addition to his role as a principal with Building Alternatives, he is an Associate Professor in Biosystems Engineering and Director of The Alternative Village at the University of Manitoba. His research areas include alternative building design, materials and building envelope performance.
Presentation: Natural Building Materials (Monday, May 22, 8:00 – 9:15 a.m.)

Jim Draeger is an architectural historian and State Historic Preservation Officer at the Wisconsin Historical Society with more than thirty years of historic preservation experience. From roadside architecture to Northwoods resorts, Mr. Draeger celebrates the importance of ordinary buildings to our daily lives through his research, writing, and lectures.
Presentation: Wisconsin’s Traditional Building Materials & Methods (Sunday, May 21, 9:30 – 10:30 a.m.)

Gerald Epp is at heart an engineer. Having consulted with leading architects for twenty-five years, he has developed a keen sense for good architecture in expressed structure, creating a strong demand for his consultation on buildings and footbridges. He started StructureCraft in the late 1990s as a response to the desire of architects to reconnect with the engineer and craftsman. Using the constraints of aesthetics, physics, and construction to shape the right solution, Mr. Epp continues to serve clients, giving projects overall vision, from the early concepts down to the execution of the details. He is licensed as Professional Engineer in a number of Canadian provinces and US states, and as a Structural Engineer in BC. His projects have won numerous awards for structural engineering innovation and efficiency. Mr. Epp has presented at many speaking engagements in North America and abroad, including the Royal Institute of British Architects.
Featured Presentation: New Ways to Frame Timber (Saturday, May 20, 8:30 – 9:30 a.m.)

Robert Foulkes owns White Oak Timber Frame in Suttons Bay, Michigan, and has been working in construction since 1975. He established a working relationship with Sam Marts Architects in the 1980s, and returned school, receiving a Masters in Urban Planning & Policy from the University of Illinois. In the past decade, he has had opportunities to recycle buildings working with the National Park Service, work on private projects to extend the walkable urban patterns in small towns, and teach some of what he has learned to architecture students at Andrews University and others at hands on “work camps” from northern New Hampshire to southern Alabama.
Presentation: How Timber Framers Talk to Designers (Saturday, May 20, 10:00 – 11:00 a.m.)
Panel: Teaching Architecture through Timber Framing (Saturday, May 20, 3:30 – 4:45 p.m.)

Peter Fraterdeus is a calligrapher, type designer, two-time NEA grantee (1981, 1985; in Calligraphic Lettering, Inscriptional, and Type Design), student of Zen Shodo, and Irish fiddler. His “Make a Mindful Mark” seminars are for anyone seeking to better focus intention and attention, through engaging the hand, eye, heart, and mind. He teaches internationally.
Presentation: Drawing on Emptiness (Saturday, May 20, 3:30 – 4:45 p.m.)

Magnus Frimer-Larsen is a designer at Trillium Dell Timberworks. The son of a Danish reed thatcher, Mr. Frimer-Larsen is keen to present this undying trade, so defining to his native region, and to pose the question: what does it have to do with North American timber framing?
Presentation: Traditional & Modern Thatching (Sunday, May 21, 8:00 – 9:15 a.m.)
Presentation: Thatching Demonstration (Sunday, May 21, 3:00 – 5:00 p.m.)
Thomas Gerner has been thatching for 18 years, working in Denmark, Holland, and Italy. He is the Chairman of the Danish Thatching Guild. He is also a board member of the International Thatching Society (ITS) and the Office of the Thatched Roof in Denmark.

Presentation: Traditional & Modern Thatching (Sunday, May 21, 8:00 – 9:15 a.m.)
Presentation: Thatching Demonstration (Sunday, May 21, 3:00 – 5:00 p.m.)

Jack Gesmundo is president of the Board of Directors of Tillers International and has served on the board for the last 16 years. He founded Hawks Hollow Builders – Custom Homes and Cabinetry in Hickory Corners, Michigan, in 1978, and in the nearly 40 years since has established a solid reputation for quality craftsmanship and innovation. Mr. Gesmundo was a board member for the Energy and Environmental Building Alliance from 1992 to 2000, serving two terms as president. He graduated from Western Michigan University in Kalamazoo in 1974 after having served in the US Marine Corps.

Presentation: Traditional Craft Skills & Current Agricultural Developments: A Fruitful Marriage (Monday, May 22, 8:00 – 9:15 a.m.)

Christian Gudmand was educated as a Mechanical Engineer and spent 3 years after college working on a mix of renewable energy projects as well as military contracts. After seeing an opportunity pop up at Hardwick Post and Beam to jump on the bench and start cutting timbers he quickly applied and crossed his fingers. A few weeks later, he left his engineering life and made his way to Manchester for his first TFG conference! After a year of banging chisels and making chips (not nearly enough time), Mr. Gudmand got thrust into running HPB, which he has been doing since.

Panel: Envisioning Evolution: Alternative Paths to Success in Timber Framing (Saturday, May 20, 12:30 – 1:45 p.m.)

Michaela Harms: After completing a university work placement with WholeTrees in 2014, Michaela Harms returned to the team to manage WT's research grants. She graduated from Metropolia UAS in Helsinki, Finland, with her BS in Civil Engineering, focused on Sustainable Building Engineering. Her thesis on the potentiality of building-integrated photovoltaic energy for southern Finland received a Nordic GBC award for innovation. With her roots in natural building, Ms. Harms hopes to continue the advancement of renewable structural design through research and development, as a WholeTrees Engineer and R&D Manager. She is an avid backwoods explorer, sauna advocate, and team trivia connoisseur.

Panel: Why Trees Are Stronger than Wood (Sunday, May 21, 1:30 – 2:30 p.m.)

Lou Host-Jablonski is an architect with almost 4 decades of design work, hands-on research, and teaching experience related to sustainable building practices. He specializes in environments for children, housing and community buildings, and design for persons with disabilities. Working with his collaborators over 20+ years, Mr. Host-Jablonski has helped develop the world’s most advanced light straw-clay construction system. He is principal architect at Design Coalition, a non-profit architectural office working in the Wisconsin and the Upper Midwest since 1972.

Presentation: Non-Petroleum Insulation System for Cold Climate Construction (Saturday, May 20, 2:00 – 3:00 p.m.)

Matt Hunter was first introduced to timber framing in Santa Fe, New Mexico, as an extension of his study of natural building and permaculture. A move to Oregon and 8+ years in the industry had him working his way up from novice to shop foreman and lead timber framer. In 2014, Matt started Ashland Post & Beam to focus on responsible material sourcing and to bring timber framing to a wider audience.

Panel: Envisioning Evolution: Alternative Paths to Success in Timber Framing (Saturday, May 20, 12:30 – 1:45 p.m.)

Robin Johnson holds an undergraduate degree in architecture and a Master of Architecture degree from the University of Michigan. Professor Johnson participates in reviews of student architectural work at the university level in a number of states, in addition to presenting at conferences and workshops that further sustainable forestry practices, timber frame construction, and promotion of sustainable land use in residential development in Ireland.

She has worked for 28 years as a licensed professional architect in Illinois and Michigan, working on a wide range of award-winning projects for a handful of small firms, each focusing on finely-crafted, well-resolved design solutions. Her solo practice has focused on locally-harvested timber frame construction, recycled components, passive solar, and highly efficient envelopes, as well as now-simple tech bustling systems like cob construction.

Presentation: Architecture as Craft (Saturday, May 20, 12:30 – 1:45 p.m.)
Panel: Teaching Architecture through Timber Framing (Saturday, May 20, 3:30 – 4:45 p.m.)
Jonathan Kline is executive director of Tillers International in Scotts, Michigan. He has been working in international development for over a decade, having implemented programming throughout Africa, Asia, and the Middle East. He holds degrees in Sustainable Agriculture, International Agriculture, and Rural Development from Sterling College and Cornell University.

Presentation: Traditional Craft Skills & Current Agricultural Developments: A Fruitful Marriage (Monday, May 22, 8:00 – 9:15 a.m.)

Tim Krahn is a licensed engineer with degrees in the civil and geotechnical disciplines. His professional interests include natural building materials; integrated design and education; energy and infrastructure sustainability; and a healthy built environment. He is a LEED-accredited professional and heads up the Ontario office of Building Alternatives, Inc.

Presentation: Natural Building Materials (Monday, May 22, 8:00 – 9:15 a.m.)

Richard La Trobe-Bateman has an international reputation for designing and building structures – from chairs and tables to bridges – using home-grown timbers, steel, and wire rope. “Richard demonstrates that ‘craft’ is a fluid, technological activity that cannot be easily categorized into one set of attitudes or lifestyles. In one sense the existence of a ‘salon de refuse’ suits La Trobe-Bateman: it provides him with a home,” says Peter Dormer in The Culture of Craft.

Mr. La Trobe-Bateman was educated at the St Martins School of Art (Sculpture) and the Royal College of Art (Furniture Design). His collections include Victoria & Albert Museum, Crafts Council, Crafts Study Centre UCA Farnham, Leeds City Art Collection, Royal Society of the Arts.

Presentation: A Walking Bridge (Sunday, May 21, 3:00 – 5:00 p.m.)

Mason Lord: Founder and Managing Partner of Hudson Valley Preservation, Mason Lord began learning the techniques behind skilled craftsmanship from a young age, first by studying industrial arts in high school and working as a carpenter’s apprentice during his summers break in high school and college. After obtaining a degree from Duke University, he apprenticed as a restoration craftsman with the National Trust for Historic Preservation at Lyndhurst.

Mason founded Hudson Valley Preservation in 1991 with a vision of integrating methodical assessment, design, and building execution, all while maintaining close client relations and a single line of communication. Mason’s knowledge of, and passion for, quality construction has been critical for HVP’s recognition as one of the top 50 remodeling companies in the “Fine Design” category by Remodeling magazine, as well as having received multiple Chrysalis and Home Building Association of Connecticut awards for a variety of remodeling projects.

Notable historic preservation projects include work on the Kent Historical Society’s 18th-century Seven Hearth, South Kent School’s 1742 Barnabas Hatch House, Pawling Historical Society’s Oblong Quaker Meeting House, Landmark Preservation Society of Southeast’s Walter Brewster House and Old Southeast Church, and Preserve New Fairfield’s 19th century Hubbell House and The Parsonage. With a combined knowledge of architecture, engineering, traditional trades, and history gained from 30 years of experience with old and new buildings, Mason’s approach revolves around acquiring a thorough understanding of the existing conditions and future potential embodied within each structure.

Presentation: Historic Fabric & Reversibility vs. Insulation & Air Sealing in Antique Timber Frames (Saturday, May 20, 12:30 – 1:45 p.m.)

Paul Malko has been with Foard panel for over 13 years and served as Technical Director for the last 10. In that time, Paul has contributed to the structural design, code compliance, and long-term durability of hundreds of buildings, timber frame and otherwise. Foard has gained a strong understanding of building science and long-term durability because Mr. Malko and Bo Foard have consulted on dozens of existing buildings undergoing repair and renovation.

He is a long time member of the Timber Framers Guild and Timber Frame Engineering Council. Within the Structural Insulated Panel Association, Mr. Malko serves on the Manufacturer’s, Technical, and Code Listing Committees, and is a past chairman of the Code Listing Committee.

Presentation: Timber Just Needs to Move: Compliant SIP Joinery & Timber Shrinkage (Saturday, May 20, 12:30 – 1:45 p.m.)
Sam Marts is the founder of Sam Marts Architects & Planners, Ltd. (previously Sam Marts Architects), which has operating since 1987. Prior to that, he worked for various architecture firms following his graduation from Miami University in 1972. Mr. Marts is a registered architect in Michigan and Illinois, and has been involved in numerous community organizations, including the Chicago Architecture Foundation, where he served as a member of the Advisory Committee for The Architecture Handbook. He is a vising critic/teacher at the Rural Studio in Alabama, the University of Illinois at Chicago, the School of the Art Institute of Chicago, Andrew University, University of Notre Dame, and the Illinois Institute of Technology.

Presentation: How Timber Framers Talk to Designers (Saturday, May 20, 10:00 – 11:00 a.m.)
Panel: Teaching Architecture through Timber Framing (Saturday, May 20, 3:30 – 4:45 p.m.)

Derek Mayhew has been with WholeTrees since its inception. He heads up operations and manufacturing for Whole Trees, as well as working closely with WholeTrees co-founder Roald Gundersen in the management of the Driftless Farm forest land. He believes that this job is on the cutting edge of real meaningful changes in the way we manage and cohabitate with Earth’s forests. Mr. Mayhew finds that his work with trees has a way of seeping into all aspects of his life, but he also spends his time parenting his son and planning the design of his future brewery on the moon.

Panel: Why Trees Are Stronger than Wood (Sunday, May 21, 1:30 – 2:30 p.m.)

Adam Miller: Active in timber framing for a dozen years, Adam Miller’s professional interests have branched out from the square rule tradition of his native New England to include scribing, log building, and l’art du trait. Valuing the recovery, practice, and preservation of traditional craft knowledge, Mr. Miller enjoys teaching and writing. He has been an Instructor for the Guild’s Community Building Program and his work has been featured in the journal Timber Framing. He is Lead Timber Framer at the Wooden House Company in Wells River, Vermont.

Presentation: New Perspectives on Scribed Log Timber Framing: The Moosilauke Ravine Lodge (Saturday, May 20, 10:00 – 11:00a.m.)

Joe Miller’s interest in timber framing grew from a project he took on with his father, rebuilding an ancestral barn in southern Indiana. In his freshman year at the Rose-Hulman Institute of Technology, he attended a lecture by Ben Brungraber. Ben must have said something inspiring, because Joe ventured forth on an ambitious track that eventually led to a Masters in Civil Engineering at University of Wyoming. While in school, he conducted innovative research on the strength of wooden dowels - findings that significantly advanced the acceptance of timber frame construction among engineers and code officials.

Master’s degree in hand, Joe had a two-year stint with Yankee Barn Homes in New Hampshire, doing engineering, lateral analysis, drafting, and frame design. Next came a spell with Trillium Dell Timberworks in Illinois, where he refined his design, engineering, and cutting skills in the shop. Meanwhile, Dr. Miller sought out a school where he could undertake intensive research on key laminated beams. Michigan Technological University gave him the green light, and now he has a Doctorate of Philosophy in Civil Engineering for his analytic methodology for the design and engineering of keyed beams. Concurrent to his advanced studies, he privately consulted on timber frame designs and taught on-line courses for Norwich University in Advanced Structural Analysis. Dr. Miller has been with Fire Tower Engineered Timber since 2009.

Presentation: Strength and Stiffness in a Seismic Event: Fundamentals & Demonstration (Sunday, May 21, 3:00 – 5:00 p.m.)

Curtis Milton: Born to build, Curtis Milton took down his first barn in 1976. He started learning modern timber framing in 1983, and began teaching what he knows in 1986. He considers himself a carpenter with some experience, and a passion for life-long, self-motivated learning that improves when shared with others. Having joined the TFG in 1987, Mr. Milton became part of the itinerant force that supplied labor to a young industry, and still travels for the right work. General contracting and timber framing on residential projects in a small New Hampshire town fills the calendar.

Believing in giving back, he served as a TFG board member for 7 years, and has participated in TFG conferences, workshops, and projects as a presenter, volunteer, lead instructor, local hero, design team manager, and project manager. Mr. Milton is currently Chair of the Apprentice Training Program (ATP) Committee, a promoter of carpentry as a profession, and a registered journeyworker, which indicates a financial commitment to the ATP as well as a level of knowledge.

Presentation: The Workshop Roof: One Mathematical Solution (Sunday, May 21, 8:00 – 9:15 a.m.)

Robert Mini joined WholeTrees in 2008 as a carpenter and has grown into our lead foreman and go-to artisan craftsman with gusto. His attention to detail and ability to execute detailed projects, from wood benches to entire commercial
structures, remains a huge asset to WholeTrees’ functionality. Mr. Mini has studied and built bamboo structures in Hawaii, bringing knowledge of re-purposing invasive wood species into viable round timber structural components. Elusive Works is his thriving art studio, where he crafts wood-turned bowls as well as large-scale trompe l’oeil murals all over La Crosse, the Driftless Region, New York City, and Hawaii.

Panel: Why Trees Are Stronger than Wood (Sunday, May 21, 1:30 – 2:30 p.m.)

Stephen Morrison came from a broad background in woodworking that included furniture making, cabinetry, timber frame construction, and residential carpentry. With a passion for woodworking and experience working for others (and naive dreams!), Stephen went into business for himself, founding MoreSun Custom Woodworking, Inc. He wears many hats: boss, designer, timber framer, Sawyer, errand boy, and self-promoter.

Being the owner of the business means he’s never really “off” work these days. And of course, he now serves as Vice President on the TFG Board of Directors and as Chair of the Community Building Project Committee. However, he still makes time for enjoying the outdoors with his family, especially on the Chattooga River. His latest hobby is beekeeping, and he’s hoping his new hive will stay alive.

Panel: Envisioning Evolution: Alternative Paths to Success in Timber Framing (Saturday, May 20, 12:30 – 1:45 p.m.)

Trond Oalann hails from a family of carpenters going back many generations. He began his career learning from his grandfather, and went on to do restoration carpentry at Bryggen, a UNESCO World Heritage site in Bergen. In 2003, he received a three-year fellowship from the Norwegian Crafts Institute to study stav construction techniques from the “old guys” and others carrying on the traditional knowledge. Mr. Oalann currently works for the Hordaland council as the Craftsman/Carpentry Consultant on restoring buildings, teaching courses on restoration carpentry, and sleuthing out old buildings for historical designation.

Presentation: Timber Framed Building in Norway: History, Usage, and Tradition (Monday, May 22, 8:00 – 9:15 a.m.)

Jonathan Orpin founded New Energy Works Timber Frame Homes, Inc, in the mid-80s, and considers himself a product of the Timber Framers Guild. “Without the camaraderie of Guild friends, and the sharing and learning of skills and information, I truly question whether we would have a viable timber framing industry today,” he remarks. Mr. Orpin is Past President of the Guild, Chair of the TFG Companies Committee, and is passionate about the craft of business in the timber frame community. He is also the owner and founder of Pioneer Millworks. Mr. Orpin divides his time between his companies’ New York and Oregon facilities.

Presentation: A Bucket of Opportunity: How One Company went from a Catastrophic Building Failure to the First Complete CLT Heavy Timber Building, with Wood Fiber Insulation, in New York (Saturday, May 20, 10:00 – 11:00 a.m.)

Presentation: TFG Companies: The Craft of Business and AIA Certification (Sunday, May 21, 1:30 – 2:30 p.m.)

Autumn Peterson was trained as a timber framer and designer and has since moved into making natural oil-based wood finishes. Her company is Heritage Natural Finishes (formerly Land Ark NW) and she is currently serving on the Board of Directors of the Timber Framers Guild. She lives in the stunning rural landscape of Boulder, Utah.

Presentation: Working with Finishes for Timber Frame Structures (Sunday, May 21, 8:00 – 9:15 a.m.)

Panel: Envisioning Evolution: Alternative Paths to Success in Timber Framing (Saturday, May 20, 12:30 – 1:45 p.m.)

Willis Rozycki began his journey as a builder in Telluride, Colorado. Random acts of kindness filtered him into timber framing here and there until he decided to pursue it full-time. Mr. Rozycki worked for Ed Shure at Timmerhus in Boulder for several years before moving to the Pacific Northwest and finding a home at Cascade Joinery. He has nearly completed his apprenticeship through the Guild and looks forward to many more years teaching and learning this craft.

Presentation: Engineered Connections in Modern West Coast Timber Framing (Sunday, May 21, 9:30 – 10:30 a.m.)

Shilpa Sankaran is a social entrepreneur who has provided communications, strategic planning, and technology advisory services for global brands, start-ups, and Fortune Global 1000 companies. She currently serves as the Executive Director of the Net-Zero Energy Coalition (NZEC). NZEC is a North American network of organizations dedicated to accelerating adoption of zero energy buildings. The organization serves as an industry backbone, coordinating game-changing initiatives that will grow the energy market today.

In 2008, Ms. Sankaran co-founded ZETA Communities, the first US manufacturer of net-zero energy modular buildings. She
developed the ZETA brand as an internationally-recognized industry pioneer in the space. ZETA built the first LEED Platinum live/work townhome (which won the 2010 Green Builder Magazine Home of the Year award, and is currently net-positive performance), 15 other NZE buildings, and dozens of other projects with a minimum EnergyStar standard.

Prior to ZETA, Ms. Sankaran was a consultant at PriceWaterhouseCoopers and Sapient Corporation, where she provided management consulting services to General Motors, Wells Fargo Bank, AAA, Nike, Verizon Wireless, and BlueCross BlueShield Association, among others.

Presentation: Net Zero Energy (Monday, May 22, 8:00 – 9:15 a.m.)

**Ariel Schecter** has a background in structural engineering and sculpture, and became hooked on timber framing about five years back. He is grateful to have had a string of fantastic teachers, employers, and projects that have shaped his craft and passion. Mr. Schecter particularly enjoys physical processes like building with floor drawings, scribing, and developing drawing, cherishing opportunities to explore these old lineages of technique. Prior to joining the crew for the Moosilauke Ravine Lodge, he designed and executed his first full-size timber frame house, built entirely with plumb line scribes on local timbers, on a rural jobsite with only hand tools and no electricity. He has just joined Timber Homes Vermont this spring.

Presentation: New Perspectives on Scribed Log Timber Framing: The Moosilauke Ravine Lodge (Saturday, May 20, 10:00 – 11:00a.m.)

Panel: Envisioning Evolution: Alternative Paths to Success in Timber Framing (Saturday, May 20, 12:30 – 1:45 p.m.)

**Dick Schmidt** joined the Timber Framers Guild in 1995, started breaking mortise and tenon joints, served as a member of the board of directors, and became a founding member of the Timber Frame Engineering Council. The research he conducted with his graduate students at the University of Wyoming has found its way into the industry’s design standard TFEC 1 – Standard for Design of Timber Frame Structures, of which he served as primary author.

After three decades at the University of Wyoming, which include two years living in Germany, nine years in administrative roles, and some amazing experiences with his students on service projects in Central America and Africa, Dr. Schmidt made another professional turn and joined Fire Tower Engineered Timber.

Presentation: Strength and Stiffness in a Seismic Event: Fundamentals & Demonstration (Sunday, May 21, 3:00 – 5:00 p.m.)

**Richard Soares** is a Brazilian national specializing in forensic wood anatomy and wood identification. He has worked with Dr. Wiedenhoeft in the Center for Wood Anatomy Research for the last several years, assisting with on-going forensic wood anatomical investigations of forest products supply chains for the Forest Stewardship Council and providing key technical expertise to recent work with the US Customs and Border Protection Agency in support of Lacey Act enforcement. Prior to his work with Dr. Wiedenhoeft, Mr. Soares was a key member of the São Paulo Amigo da Amazônia project in Brazil where he conducted numerous trainings of Brazilian law enforcement and assisted in the forensic aspects of the program, which resulted in tens of millions of Reais in fines over the project.

Pre-Conference Seminar: Wood Species Identification Workshop, Level 2 (Wednesday, May 17, 8:30 a.m. – 5:00 p.m.)

**Steve Thomas**: Known as a serial renovator, Steve Thomas helped catapult *This Old House* to the top of PBS’s list of most-watched ongoing series of all time. He was honored with a 1997-1998 Daytime Emmy Award, and a total of nine nominations for “Outstanding Service Show Host.” He went on to highlight historical restorations on *Save Our History* on The History Channel and green renovation across America on *Renovation Nation* on Discovery’s Planet Green.

He has renovated his own homes for more than 35 years, starting with a run-down 1920s craftsman cottage in Olympia, Washington, then two historic homes in Salem, Massachusetts, and a cabin and barn on an island off the coast of Maine. He just completed renovating Sea Cove Cottage, a 1905 Victorian in the center of a classic Maine lobstering village, which he featured on his popular Facebook page, “SteveThomasHome.” He’s a popular speaker, video producer, writer, blogger, photographer, renovator, and branding consultant. He also consults on green, sustainable building and renovation for clients all over the United States.

In between early renovation projects, Steve’s yen for adventure, which he attributes to his late grandfather, a missionary in the Alaskan Arctic, inspired him to combine his love of fine woodworking with his passion for the sea and sailboats. In the early 1980s, he journeyed to the remote Micronesian island of Satawal to learn the ancient technique of star path navigation under the late master navigator, Mau Piailug. Steve’s research resulted in the critically acclaimed book, *The Last
Navigator, and a documentary for the Adventure series on PBS. It was in 1989, between research trips to the Alaskan Arctic for a second Adventure book and film, when Steve got a call from the Adventure series publicist, who also worked for This Old House. The show’s producers were conducting a nationwide search for a new host, and the rest is history.

Steve received his undergraduate degree in philosophy from the Evergreen State College in Olympia, Washington. He lives in midcoast Maine with his wife, Evy, and their standard poodle, Emma. His son, Sam, is a videographer in Santa Fe, NM. 

**Featured Presentation: Building Green on the Pale Blue Dot (Monday, May 22, 9:30 – 11:00 a.m.)**

**Daniel Troth**, owner of GreenTech Construction, currently builds custom homes in central Ohio and incorporates antique timber frames into these homes whenever possible. He joined the Timber Framers Guild after attending the 2nd annual conference at Marlboro College (VT) in 1986. He attended Tedd Benson’s workshop in Alstead, NH, where he learned enough of the craft to singlehandedly build Joel McCarty’s and Susan Norlander’s house in one week. In 1991, Mr. Troth joined two Akron architects to form ReBarn in an effort to convert barns into homes in Ohio. Even though Steven Spielberg lived in one on Long Island, they were not appreciated in Ohio. He attended the first Ohio Barn Conference in 2000 and shortly thereafter became a founding member of Friends of Ohio Barns, a non-profit organization dedicated to preserving the remaining, but quickly disappearing, iconic historic barns in the state. The Ohio Barn Conference XVIII was held recently in Millersburg, Ohio. Mr. Troth has been collecting antique photographs of barn raisings for over 25 years and plans to write a book on the subject.

**Presentation: A Photographic History of Barn Raisings (Saturday, May 20, 3:30-4:45 p.m.)**

**Andrea Warchaizer** is a graduate of the Yale School of Architecture and has specialized in the design of timber framed structures since 1990. Her company, Springpoint, Inc, provides design services to individual clients and consulting to the timber frame industry with a goal of facilitating site sensitive, resource efficient, healthful and life-enhancing buildings. In addition to being a member of TTRAG, Ms. Warchaizer is a current member of the TFG Board of Directors.

**Presentation: Photogrammetry for Documentation of Existing Structures (Saturday, May 20, 3:30-4:45 p.m.)**

**Alex C. Wiedenhoeft** is a Research Botanist and the Team Leader of the Center for Wood Anatomy Research at the US Forest Service’s Forest Products Laboratory in Madison, Wisconsin. He is an Associate Editor of the International Association of Wood Anatomists Journal, and serves on their Board of Directors. He holds Adjunct Assistant Professorships in the University of Wisconsin-Madison’s Department of Botany, in the Department of Forestry and Natural Resources at Purdue University and, and is a Foreign Professor in the Department of Biological Sciences (Botany) at the Universidade Estadual Paulista – Botucatu, Brazil. His lab does research in botanical wood anatomy, biocentric wood science, and forensic wood science, and his laboratory is the pre-eminent source of forensic wood identification in the country.

**Pre-Conference Seminar: Wood Species Identification Workshop, Level 2 (Wednesday, May 17, 8:30 a.m. – 5:00 p.m.)**
TRADESHOW

TRADESHOW HOURS
SATURDAY MAY 20  8:00 A.M. - 7:00 P.M.
SUNDAY, MAY 21  8:00 A.M.- 4:00 P.M.

2017 Timber Framers Guild Tradeshow
Madison, Wisconsin

1. Simpson Strong-Tie Company
2. SIPA
3. RothoBlaas
4. Delson Lumber
5. Porter SIPs
6. TFG Gear
7. Enercept SIPs
8. Stahly Engineering & Associates
9. Dietrich's North America
10. Big Timberworks
11. The Murus Company
12. Log and Timber Connections
13. Pioneer Millworks
14. Energy Panel Structures
15. Sauter Timber
16. Montana Reclaimed Lumber
17. Timberwolf Tools
18. Fire Tower Engineered Timber
19. Fraserwood Industries
20. Heritage Natural Finishes
21. TFG Community Table

Conference Registration & Community Table

1. Simpson Strong-Tie
2. SIPA
3. RothoBlaas
4. Delson Lumber
5. Porter SIPs
6. TFG Gear
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21. TFG Community Table
Big Timberworks – Booth 10
Big Timberworks began in 1979 as a business that was informally known as “a coalition of log building Gypsies.” Today, BT has evolved and expanded to include timber framing, home building, furniture, and design. Still clinging to our roots as passionate craftsmen and women at heart, we are now a coalition of designers and builders focused on sustainable building materials and personalized designs with character and soul. Our goal is to always be moving ahead and trying new techniques, without losing sight of age-old traditions. Using seasoned techniques passed down from master builders centuries ago, Big Timberworks is a one-stop shop where creativity and accountability go hand in hand.

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Delson Lumber – Booth 4
Delson Lumber is a North American wholesale/distribution company stocking an assortment of Douglas Fir appearance grade timbers. Our products are used in residential and commercial construction where the highest architectural standards are specified. We strive for excellence in the quality of the materials we sell and the level of service we provide to our customers.

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Dietrich’s North America – Booth 9
Dietrich’s was the first company to make design software specifically for the wood construction industry. In 1982, Josef Dietrich, a master of carpentry, developed the first programs for German carpenters to calculate roof shapes, compound angles and cuts. Today Dietrich’s is the largest provider of wood construction software in Europe and has grown steadily since entering the North American market in 2002.

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Fire Tower Engineered Timber – Booth 18
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Fraserwood Industries – Booth 19
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Heritage Natural Finishes, LLC – Booth 20
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Porter SIPS – Booth 5
Porter Corp, founded in 1964, is a design, engineering, and manufacturing company focusing on exterior structures and insulated building envelopes. Porter Corp was one of the first producers of SIPs (Structural Insulated Panels). Today, PorterSIPS is the oldest SIP manufacturer in existence and continues to be one of the industry leaders. Our employees are dedicated to providing our customers with the best products and service available in our industry. Porter Corp also manufactures Poligon®, which is a line of factory fabricated, ready to assembly, park shelters. Poligon® shelters are manufactured in our steel processing plant, located on the same campus as our SIP manufacturing plant.

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RothoBlaas – Booth 3
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Stahly Engineering & Associates – Booth 8
Stahly Engineering & Associates, a full service civil engineering and survey firm, believes that building positive relationships by delivering quality services is the key to our success. Personal involvement from owners and project managers in individual projects performed and the communities we serve strengthens our commitment to our clients’ goals. Stahly Engineering provides engineering services in the fields of transportation, site development, water and wastewater systems, and structures. We also assist public and private clients with planning, grand writing and administration, GIS, all types of survey services, and construction inspection.
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Structural Insulated Panel Association – Booth 2
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