



# The Maine **Mass Timber** Event

## *Seizing the Opportunity*

**October 11<sup>th</sup>, 2018**


**8:45am-5:00pm**

**Wells Conference Center**

**University of Maine**

**MMTCC**  
MAINE MASS TIMBER COMMERCIALIZATION CENTER

  
U.S. ECONOMIC DEVELOPMENT ADMINISTRATION



Many are predicting the coming of a Timber Age, where Northern forests and rural economies supply the growing demand for urban construction and housing. In the Northeast, Maine and its forests sits atop one of the largest urban population centers on the planet. With over 90% of its land area covered in trees, Maine is the most heavily forested state in the nation, making it a prime candidate for economic revitalization through the sustainable production of mass timber.

Hosted by the Maine Mass Timber Commercialization Center (MMTCC) and WoodWorks, this conference is part of an initiative to invigorate the region's forest-based economy by bringing innovative mass timber manufacturing and projects to the State of Maine. A number of topics will be explored, including both supply-side (manufacturing, utilization of locally-sourced raw materials, workforce needs) and demand-side issues (design and construction of products and structures, code applications, fire resistance, and developer obstacles). By presenting a dynamic mix of speakers, including a CLT company that has announced plans to manufacture in Maine, as well as architects and engineers, this event will bring together regional stakeholders to address questions that commonly arise when discussing this exciting new (to the U.S.) construction type.

Attendees qualify for 6 AIA/CES HSW LUs, 6 PDH credits, 0.6 ICC credits or 6.5 SAF CFE credits.



## Welcome & Introduction

### 8:45 – 9:30, Room 1

#### Russell Edgar, UMaine

Russell Edgar is the Wood Composites Manager at the Advanced Structures and Composites Center at the University of Maine where he has managed federal and industrially-funded research on solid and engineered wood products for the last 16 years. A major area of recent research has been on Mass Timber, including Cross Laminated Timber. Russell also coordinates the Maine Mass Timber Commercialization Center and its Advisory Committee, a group of regional stakeholders interested in seeing mass timber manufacturing flourish in Maine, supplying markets throughout the Eastern seaboard and beyond.

#### Bill Parsons, Vice President of Operations, WoodWorks

A licensed engineer in the State of California, Bill spent 15 years working in the wood industry before joining WoodWorks in 2014. He has led the strategic roll out of new product lines, managed technical teams and grown the long-term profitability of business units. He has also managed help desk support teams, trained users throughout North America on products and software, and provided skills training and development. Bill has a Master's from Washington State University and an undergraduate degree from South Dakota State University.

#### Dr. Joan Ferrini-Mundy, UMaine President

Joan Ferrini-Mundy is the president of the University of Maine and the University of Maine at Machias. Prior to joining the UMaine and UMM communities on July 1, 2018, she was the chief operating officer of the National Science Foundation. Ferrini-Mundy was a member of the mathematics and teacher education faculty of Michigan State University from 1999–2010, where she served as Associate Dean for Science and Mathematics Education in the College of Natural Science and Director of the Division of Science. She was named a University Distinguished Professor there in 2005. Ferrini-Mundy has had a distinguished career, with more than 100 publications spanning the fields of mathematics education, STEM education and policy, and teacher education. Among her awards and recognitions are the U.S. Senior Executive Service Presidential Rank Award of Distinguished Executive, MSU's University Distinguished Professor, and a Fellow of the American Mathematical Society. At the University of Maine, Ferrini-Mundy is placing an early priority on meeting with students, faculty, staff, and the wider UMaine community of alumni and supporters. She serves on the board of Maine Center Ventures and Maine and Company.

#### Dr. Stephen Shaler, UMaine

Stephen Shaler is Director of the School of Forest Resources and Associate Director of the Advanced Structures & Composites Center at the University of Maine. His research centers on wood-based composite materials and has received numerous awards, including the L.J. Markwardt Wood Engineering Award (three times). He is the United States representative to the International Council of the International Union of Forest Research Organizations (IUFRO), sits on the scientific advisory committee of the Processing and Engineering Division of the Malaysian Palm Oil Board (MPOB), is a member of the executive committee of the National Association of University Forest Resource Programs (NAUFRP), and is a trustee of the Maine chapter of The Nature Conservancy.

#### Pre-recorded Addresses

U.S. Senator Susan Collins  
U.S. Senator Angus King

**Mass Timber in Maine and Beyond:  
Products, Projects and the Case for Local Timber  
9:30 – 10:30, Room 1**

Due to their high strength, dimensional stability and positive environmental performance, mass timber building products are quickly becoming materials of choice for sustainably-minded designers. Regions of the country such as the Pacific Northwest, the Southeast and New England have shown particular interest in adopting this new style of construction, undoubtedly due in large part to their abundant forest resources. This presentation will provide an overview of the variety of mass timber products available, including glue-laminated timber (glulam), cross laminated timber (CLT), nail laminated timber (NLT), heavy timber decking, and other engineered and composite systems. Applications for the use of these products under modern building codes will be discussed, and examples of their use in U.S. projects reviewed.

*Ricky McLain, PE, SE, Senior Technical Director, WoodWorks*

*Ricky is a licensed Structural Engineer and Professional Engineer in the states of New York, Massachusetts, New Hampshire and Vermont. He has extensive experience in lead engineer roles related to the structural design, project management and construction administration of new single-family, multi-family, municipal, industrial, and mixed-used buildings. Before joining WoodWorks, Ricky was a Senior Structural Engineer, working on projects in the Northeast from Maine to Maryland. He is Executive Director of the Structural Engineers Association of Vermont and a member of the ASCE Structural Wind Engineering Committee, SEI Blast Protection of Buildings Standards Committee, and NIBS Offsite Construction Council Board. Ricky received a BS in Civil Engineering from the University of Maine and an MS in Structural Engineering from Norwich University.*

*Marc Rivard, PE, SE, Regional Director, WoodWorks*

*Marc is a licensed Structural and Professional Engineer in California, Massachusetts and New Hampshire, and received his BS in Civil and Environmental Engineering from UMass Amherst. Prior to WoodWorks, he was a Senior Structural Engineer involved primarily with seismic design and analysis of new and existing buildings. Marc has experience providing structural calculations, plans, specifications, construction administration and structural plan review services for a wide range of building types, including multi-family/mixed-use, educational, commercial, office, institutional, and military.*

**Northern New England Forests Feeding Urban Demand for Mass Timber  
10:45 – 11:45, Room 1**

The contemporary mid- and high-rise city is built with mineral-based materials that have been extracted, smelted, sintered, or synthesized through intensive fossil-energy based industrial processes with significant environmental footprints. Regional as well as global trends in urban growth suggest that the demand for these materials and processes will rise sharply over the next 30 – 50 years, setting the stage for a significant spike in greenhouse gas emissions associated with the demand for new buildings and infrastructure. Potential ecological and economic synergies between the enormous northeastern continental woodshed and rapidly urbanizing landscapes that line the northeastern seaboard of the United States suggest an alternative: the transformation of dense urban centers into massive carbon sinks, made possible through the broad implementation of emerging mass timber construction technologies and regulatory and economic policies that promote timber building in cities and sustainable management of source forests.

Alan Organschi, Gray Organschi Architecture

Alan Organschi is a principal and partner at Gray Organschi Architecture ([www.grayorganschi.com](http://www.grayorganschi.com)) and founder of the fabrication construction firm JIG Design Build in New Haven, Connecticut. In addition to his role as Coordinator of the Jim Vlock First Year Building Project at the Yale School of Architecture, he also serves as Senior Critic in Architectural Design and a Lecturer in Building Technology. His current research project, the Timber City Initiative ([www.timbercity.org](http://www.timbercity.org)) explores the application of emerging structural wood technologies to the construction of global cities. He has written and lectured extensively on the carbon sequestration benefits of biogenic material substitution in dense urban building and civil infrastructure. In 2012, Mr. Organschi and his partner Elizabeth Gray were honored for their work with an Arts and Letters Award in Architecture by the American Academy of Arts and Letters.

**Maine Mass Timber Design Competition**  
**11:45 – 1:00, Room 1**

As part of lunch, Ryan Kanteres will be presenting the results of the 2018 Maine Mass Timber Design Competition. Maine Huts & Trails maintains a network of backcountry trails and remote wilderness lodges woven through the woods and mountains of Western Maine that provide a unique opportunity to explore and discover this beautiful region. The goal of this year's inaugural competition was to study and develop design concepts for a new hut on an established backcountry site, as well as to explore the implementation of mass timber construction technologies, particularly cross laminated timber construction, in a remote location.



Ryan Kanteres, Scott Simons Architects

Ryan has been practicing in New England for more than 15 years. He is currently Senior Associate at Scott Simons Architects, in Portland ME, and an adjunct professor in the Architecture Department at University of Maine Augusta, in addition to serving as the Speaker's Chairperson for the Architalx lecture series. Ryan is a founding member of the USGBC-NH, and is currently a member of the AIA-Maine Committee on the Environment (COTE). With a philosophy undergraduate degree, a Master of Architecture from the University of Oregon, a background in construction, and years of experience working in the public realm, Ryan's commitment to architecture is grounded in his passion for community engagement and sustainable design. His experience includes such varied positions as an Historic Architect in remote Wrangell St. Elias National Park and a researcher studying micro enterprise businesses in East London. Through his involvement with the Maine Mass Timber Commercialization Center he gives architectural perspective to Maine's role in this emerging industry.





### **Maine Mass Timber: Opportunity and Impact** **1:00 – 1:45, Room 1**

SmartLam, the first producer of cross laminated timber (CLT) products in the United States, will share their vision for the rise of mass timber in the United States. SmartLam operates a facility in Columbia Falls, MT, and is about to commission a much larger, fully automated second plant nearby. Casey Malmquist, SmartLam's President, will also provide an update on SmartLam's plans to produce and/or process CLT in Maine.

#### Casey Malmquist, SmartLam

*Casey Malmquist, President and CEO of SmartLam, has served in this position since SmartLam's inception in January of 2012. Mr. Malmquist has led the SmartLam team from a ground level startup to becoming a globally recognized producer of cross laminated timber products. Mr. Malmquist has over 30 years' experience owning and operating a successful construction and development company. Casey graduated from Gustavus Adolphus College and holds a BS degree in Environmental Sciences.*

### **Mass Timber Construction with Glulam** **1:45 – 2:30, Room 1**

This presentation will discuss how glulam is a central component of mass timber construction. It will cover the manufacturing process, specifications, shared design responsibility, and the new challenges collaboration with CLT manufacturers presents. Codes, including fire safety, AITC standards, benefits of using custom prefabricated and prefinished glulams, and mass timber building case studies will be discussed.

#### Liz Connor, Unalam

*Liz Connor is a sales professional at Unalam, a custom glulam manufacturer with over 125 years of wood product experience. She specializes in continuing education for building professionals. Liz has given over 70 presentations across the Northeast to architecture and engineering firms, universities, and members of the fine arts community. Her background in design and arts collaboration gives her a strong sense of what it takes to design and actualize a project with all members of the design and construction teams. She gives tours of the Unalam plant to private owners, members of the industry, and cub scouts alike.*

## Increasing Demand for Mass Timber

1:00 – 1:45, Room 2

Mass Timber is an early adopter product that is not yet a mainstream structural building solution demanded by the market in the Northeast. Demand, as defined here, occurs when a system solves more design challenges than it creates. Not until there are "proven" strategies developed for dealing with the challenges will the market widely demand the product as a solution. This panel will discuss some of the challenges they have faced when a mass timber structure was chosen for their project, and how those challenges were met. These panelists have experience designing, or building with mass timber, and have met the obstacles and have overcome them in creative ways. The goal of this panel is to identify tools we can all use when evaluating projects that are considering mass timber as a structural solution.

### Matt Tonello, Consigli (Moderator)

*Matthew Tonello is Director of Operations for the Portland, Maine office of Consigli Construction, a leading construction manager and general contractor serving clients throughout the Northeast and Mid-Atlantic. Matt is a registered structural engineer in Maine and Massachusetts and a LEED® Accredited Professional. Matt spent the first ten years of his career as a structural engineer working on new and restoration projects in the Boston area, then led the initial development of the structural engineering application for Revit Technology, prior to it being acquired by Autodesk. For the past 16 years, Matt has led the operations of Consigli Construction in Northern New England. Matt holds a Bachelor of Science in Civil Engineering from the University of Maine, a Master of Science in Civil Engineering/Structural Concentration from UMass Lowell and a Master of Business Administration/Real Estate Development & Entrepreneurship from Boston University Graduate School of Management.*

### Paul Becker, Becker Structural Engineers

*Paul Becker is President of Becker Structural Engineers, Inc., a 27-person structural consulting firm located in Portland that he founded in 1995. He holds a bachelor's degree from Penn State and a master's degree from UNH. He serves on the board of Maine Preservation and the Portland Society for Architecture and is on the legislative affairs committee of ACEC Maine. His firm's design work covers the full range of building typology from private residences to large civic buildings. Paul is committed to making mass timber a viable product for the range of building types they design.*

### Chris Carbone, Bensonwood

*Chris has been with Bensonwood since 2003 and leads the engineering department to develop creative solutions for sustainable architecture and construction. He is recognized as an innovator in wood-based, off-site construction systems, and has presented at numerous conferences and institutions promoting the use of wood as a key element in modern building structures and enclosures. He has spearheaded Bensonwood's involvement in mass timber, working on cross-laminated timber projects throughout the country. During his tenure, Chris has continued Bensonwood's tradition of excellence in detailing masterful wooden joinery and connections for timber frames. He is a member of the Timber Framers Guild, Timber Frame Engineering Council, and Structural Engineering Institute (SEI) within the American Society of Civil Engineers (ASCE). He was on the 2014 list of top '20 under 40 Engineers' in the New England region as judged by Engineering News Record. Chris has an MS in Building Technology from MIT.*



**Rob Dodd – EVP of Construction – Nabholz Construction**

*Rob is the Executive Vice President of Operations at Nabholz Construction located in Rogers, Arkansas. He has been with Nabholz for 11 years, having served as senior project manager and project executive prior to his current role. Before joining Nabholz in 2007, Rob spent 21 years in the Structural Engineering and Architecture fields. Rob has led the team on the University of Arkansas Stadium Drive Residence Hall project where mass timber is the primary structural system for a 700+ bed residence hall. This project is the first large scale mass timber residence hall in the nation and is the largest mass timber project under construction in the United States. In planning this project, Rob was instrumental in developing a public procurement model for the superstructure and in doing so worked on developing a self-performance crew to erect the structure. Rob's innovative approaches to planning projects has led to the successful implementation of mass timber on this project and has been assisting other contractors in developing plans for successful implementation of mass timber planning on projects throughout the U.S.*

**Tall Wood Buildings and Related Code Changes**

**1:45 – 2:30, Room 2**

In early 2016, the International Code Council (ICC) Board of Directors approved the creation of an ad hoc committee to explore the building science and safety of tall wood buildings. The Tall Wood Building (TWB) Ad Hoc Committee was tasked with investigating the feasibility of, and taking action to, develop code changes for tall wood buildings. Since that time, the Committee has reviewed voluminous materials regarding tall wood buildings, including results of various testing from around the world. During the work of the ICC Tall Wood Building Ad Hoc Committee, special test programs were developed and performed with input from the Fire Service. Accordingly, a number of full-scale compartments constructed of mass timber building elements and furnished with furniture and contents were fire tested. Results of these tests that were used by the ICC Tall Wood Building (TWB) Ad Hoc Committee in the development of proposed changes to the 2021 IBC will be presented in addition to the resulting proposals, developed by Committee consensus and submitted to the ICC Code Development Process.

**Matthew Hunter, American Wood Council**

*Matthew M. Hunter, BCO, is the Northeast Regional Manager for the American Wood Council (AWC), which produces internationally recognized design standards for wood construction. His experience includes all phases of commercial and residential land development, building inspection, plan review, and civil engineering. Prior to joining the AWC, Matt was a Building Code Official, Sewage Enforcement Officer, civil engineering designer, draftsman, and field inspector for fifteen years. He earned his Bachelors of Science in Environmental Design from Delaware Valley College. Matt has served various townships and boroughs throughout eastern Pennsylvania and has worked in the trades as a residential framing carpenter. He is currently a certified Building Code Official and holds a total of nine International Code Council (ICC) and PA Labor and Industry certifications. He is an ICC member and is active in ICC Regions VI & VII and serves on the ICC Sustainability Membership Council. Since joining the AWC, Matt has provided extensive continuing education training and outreach on cross laminated timber (CLT) and mass timber buildings to code and fire official organizations, as well as State and Federal entities like the New Jersey Department of Community Affairs and the Department of Consumer and Regulatory Affairs in Washington, DC.*



Benjamin Herzog, UMaine

*Ben is a Wood Technologist at the Advanced Structures and Composites Center at the University of Maine, managing federal and industrial-funded research on lumber and engineered wood products. Prior to returning "home" to UMaine in 2017, Ben was the Laboratories Manager, Technical Services Division, at APA – The Engineered Wood Association in Tacoma, Washington. In addition to his extensive laboratory experience, Ben is a member of the PRG 320 ANSI CLT Committee and the Forest Products Society. He completed his BS and MS, as well a Graduate Certificate in Advanced Engineered Wood Composites at the University of Maine and has authored numerous journal articles and research reports.*

**Maine's Resources, Part 1: The Forest  
2:45 – 3:30, Room 1**

Interested in having a lively back and forth discussion on the emergence of mass timber and CLT manufacturing in the State, and how Maine sawmills fit into the picture? Topics of discussion include:

- What sort of species and products are CLT manufacturers looking for now and in the future?
- Are Maine's sawmills capable of producing this now and/or willing to make investments to produce it in the future?
- Where are the plants going to be sited? Does it make sense to site the CLT site on a mill site?
- What happens if the spruce budworm comes calling again?
- How can we work together to compete with established players (Europe, Canada)?
- What are our Strengths? Weaknesses? Opportunities? Threats?

Alden Robbins, Robbins Lumber (Moderator)

*Alden is the Vice President of Robbins Lumber Inc. and President of Georges River Energy. He is the current 2nd Vice Chairman of the Northeastern Lumber Manufacturers Association (NELMA) and a North American Wholesale Lumber Association (NAWLA) and Retail Lumber Dealers Association of Maine (RLDAM) board member. In 2011, Alden was appointed to the Executive Committee of the Softwood Lumber Board (SLB). Reflecting on SLB's mission, Alden stated, "During my time on the SLB we have seen great strides made towards the adoption of mass timber as a viable building option to compete in arenas where concrete and steel were previously the only option. Through research and promotion, the SLB has spearheaded the effort to get mass timber into areas where it is currently not allowed by code. The SLB is committed to carefully funding projects that maximize the benefit of the industry's investment through thorough vetting, due diligence, and proven metrics." Alden received his BS in Business Management from UMaine and his MBA from Northern Arizona University.*

Jason Brochu, Pleasant River Lumber

*In 2004 Jason became a partner in Pleasant River Lumber Company (PRL). Jason and his brother Chris currently serve as Co-Presidents of PRL and affiliates. Since their group purchased PRL, they have expanded from one mill with 72 employees to 4 mills and a trucking company with total employment of over 300 people. PRL currently produces 200 million board feet of SPF and 35 million board feet of Eastern White Pine lumber in Maine annually. PRL is in the middle of a \$20 million expansion to its SPF facilities that will bring its total SPF production in Maine to over 300 million board feet. Jason has served on the Boards of the Maine Forest Products Council, the Northeastern Lumber Manufacturers Association, The Forest Products Group Trust, and the Coalition for Fair Lumber Imports.*

Jérôme Pelletier, J.D. Irving

Jérôme graduated from Université de Montreal in 2001 with a Bachelor's degree in Forestry. He also completed an MBA with the University of Western Ontario in 2008. He has been with J.D. Irving, Limited since 1998. As of December 2015, he occupies the role of Vice President of the Sawmills Division. Jérôme has been actively involved with the Maritime Lumber Bureau since 2014, first as Co-Chair of the Grading Committee, and more recently as a member of the Board of Directors. In addition, in the fall of 2017, he was appointed to the Board of the Canadian Lumber Standards and Accreditation Board, and in June 2018 to the Board of the Canadian Wood Council.

Ken Laustsen, Maine Forest Service (retired)

Ken recently finished a distinguished forest products career that started in 1974 as a ROW Foreman doing brush control work for Asplundh and ended this year when he retired from the Maine Forest Service as our Forest Biometrician - a position he held since 1999. In between, Ken worked for Great Northern Paper Company (1975-1999) as a development engineer, operations forester and woodlands analyst. Ken has been a member of the Society of American Foresters since 1974 and was an SAF Fellow in 2008. He has also served on the SAF Certification Review Board Committee and SAF Forest Technology School Accreditation Committee. His professional achievements include: SAF Certified Forester; Maine Licensed Professional Forester; USDA Forest Service, Forest Inventory & Analysis, Techniques Research Band Member; Statistics Band Member; United States Forest Service 2001 Director's Award for Excellence, and Maine Forest Products Council 2018 President's Award. Ken received his BS and MF in Forest Management from the University of Maine.

Jeff Easterling, NELMA

Jeff Easterling is President of the Northeastern Lumber Manufacturers Association (NELMA), a position he has held since 2001. Jeff is a 1980 graduate of Mississippi State University where he obtained Bachelor of Science degrees in Wood Science & Technology and Business Administration-Marketing. He received the honor of Alumni Fellow in 1999 and Alumni of the Year in 2000 from the College of Forest Resources at the University. In addition to his current duties as President of NELMA, he is Executive Director of the Northeastern Lumber Manufacturers Institute. Prior to NELMA, Jeff was Vice-President of Marketing for the Southern Forest Products Association in New Orleans, Louisiana where he directed similar programs and activities for the Southern Pine wood products industry. Jeff is a member of the American Lumber Standard Committee (ALSC) and its Executive and Enforcement Subcommittees. He is the current Chairman of the National Grading Rules Committee of ALSC. Previous professional affiliations include: North American Wood Products Promotion Council, Chairman, 1997-99; Forest Products Society, 1977-present with a term on its Board of Directors, 1991-92; American Wood Preservers Assn. T-2 Standards Committee, 1989-1996, and American Lumber Standard Committee – Treated Advisory Board, 1992-1996.

Patrick Strauch, Maine Forest Products Council

Patrick Strauch received his BS degree in forest management and his MS degree in silviculture from the University of Maine. He began his career as a forester for St. Regis Paper Co. and U.S. Gypsum Company in Maine and then moved to manage recycling and trucking companies, becoming a regional vice president of Casella Waste Systems and director of the Sawyer Companies in Bangor. He returned to the forest industry in 2001 as coordinator of the Maine Sustainable Forestry Initiative (SFI). In January 2004, he became the executive director of the Maine Forest Products Council (MFPC), a not-for-profit trade association that has been the voice of Maine's forest economy since 1961. In 2014, he received the W.D. Hagenstein Communicators Award from the Society of American Foresters. Farm Credit of Maine gave him its "Distinguished Service Award" in 2012. Patrick resides on a farm in Exeter, Maine, with his wife Nancy and their three children.

**Maine's Resources, Part 2: The Workforce**  
**3:30 – 4:15, Room 1**

This session aims to put the development of Mass Timber in Maine into a broader economic context by considering the state of the State economy, current labor market conditions, and considerations for future industry development. Panelists will discuss relevant trends and challenges in the state workforce and forest product sector, compare the types of jobs and skills associated with the development of mass timber, and consider the existing supply of workers in local labor markets. Strategies and ideas for targeting youth and adults to cultivate and build a future forest products workforce that supports mass timber will also be suggested. Finally, panelists will cover the potential economic contribution of mass timber, and CLT specifically, to the state economy.

**Ryan Wallace, MCBER-USM**

*Ryan Wallace is director of the Maine Center for Business and Economic Research at the University of Southern Maine providing economic research and expertise to private and public sector organizations. He has authored several reports on the advanced manufacturing workforce and regional labor markets and is currently assessing the economic potential and workforce implications of CLT in Maine. Ryan is on the Maine Mass Timber Advisory Committee and teaches in the Muskie School of Public Service at USM. He is completing his PhD in Regional Planning from the University of Massachusetts Amherst and holds a BS in Finance from Bentley College.*

**Mindy Crandall, UMaine**

*Mindy Crandall is an Assistant Professor of Forest Management and Economics in the School of Forest Resources at the University of Maine. She holds a BS in Forest Management and a PhD in Applied Economics, both from Oregon State University. Her research focus is on the relationship between the forest products economy and rural communities, and the labor markets that tie them together.*

**UMass Olver Design Building: From Concept to Occupancy**  
**2:45 – 3:30, Room 2**

Completed in 2017, the John W. Olver Design Building at the University of Massachusetts Amherst is the first of its kind in the U.S. At four stories and 87,500 square feet, this mass timber project features a glued-laminated (glulam) timber column-and-beam frame, mass timber lateral force-resisting system, hybrid CLT/concrete floor system, and unconventional cantilevered forms with integration with other structural systems. The presenters highlight two aspects of the project from two vantage points: the design process will be discussed by the principal architect and the construction and occupancy phases will be reviewed by a professor and client representative who now works in the building. From design concepts to development, risk management of code approval of procurement, through construction and occupancy, this session will address the process and collaboration required to see this groundbreaking structure from vision to fruition in a steel-dominated construction industry.



Tom Chung, Leers Weinzapfel Associates

*Tom S. Chung AIA, LEED BD+C is a Principal and design leader at Leers Weinzapfel Associates Architects, recipient of an AIA Firm Award in 2007. He has led the firm's many award-winning projects, including the Museum of Medical History and Innovation at MGH and John W. Olver Design Building at the University of Massachusetts, Amherst. Born in Seoul, Korea and raised in the U.S., Tom received his degrees in Architecture at the University of Virginia and the Harvard Graduate School of Design. As an educator, Tom has taught design studios at Northeastern University School of Architecture and Wentworth Institute of Technology. As a design critic, he serves on design reviews and award juries, and speaks on architecture focusing on Advanced Timber Technologies and Sustainability at conferences throughout the country.*

Peagi Clouston, UMass

*Dr. Clouston has been working in the field of timber engineering for almost 30 years. As an Associate Professor at the University of Massachusetts, she teaches structural timber design and material mechanics to students of architecture, engineering, and construction technology. Author of more than 80 publications, she conducts research on the structural behavior and efficient use of mass timber and bio-based composite materials. Current research topics include: cross laminated timber (CLT) panels from low-value eastern wood species, wood-concrete composite floor systems, computational modeling of structural composite lumber, and laminated veneer bamboo connections. Dr. Clouston has been a registered professional engineer (EGBC) since 1992. She is Associate Editor of the ASCE Journal of Materials in Civil Engineering and serves on numerous federal peer review panels and committees.*



**Ushering in the Timber Age: Economic & Sustainable  
Opportunities for the 21st Century  
3:30 – 4:15, Room 2**

Maine timber producers have a unique opportunity to help address the significant environmental and development demands placed on the built environment by the twin needs to expand housing and simultaneously address climate change. At a moment when the built environment is facing dramatic shifts, the need for innovation and sustainable design approaches is more essential than ever. Mass timber construction offers a solution for the profound demands cities are facing and provides new economic opportunities for the forest products sector: In particular for Maine's forests. These opportunities could establish New England wood as the sustainable, low-carbon building material for the 21st century, serving to usher in The Timber Age.

Frank Lowenstein's (NEFF) and John Klein's (MIT) session will outline current research on how the forests can link to cities through demand, design, technology, supply and sustainability. Topics covered will include: A summary of the latest climate science and the necessary timeline for avoiding dangerous climate degradation, a comparison of the operational and construction energy required by traditional buildings, the importance of local sustainability criteria and local sourcing in this global context, how design can stimulate demand for mass timber products, technological opportunities associated with mass timber methods of construction, and recommendations for how the forest products sector might profitably engage to enhance demand for and climate benefits of Maine products.

Frank Lowenstein

*Frank serves as deputy director and chief conservation officer for New England Forestry Foundation, a 75 year old organization that advocates for sustainable forest management and conservation in New England. He also serves on the faculty of both Harvard University's Extension School and Brandeis University, where he teaches courses on climate change and land conservation. He has published extensively on climate issues, including in the Journal of Forestry. Since 2014, he has worked with other staff at New England Forestry Foundation to create the Build It With Wood program, which seeks to build a sustainable supply chain from well-managed New England forests to new urban mass timber buildings, explicitly as a climate solutions angle.*

John Klein

*John is a Principal Research Scientist at the Massachusetts Institute of Technology (MIT) and the Director of John Klein Design (JKD), a professional architecture and design firm based in Boston, Massachusetts. At MIT, John's research specializes in industrial wood building technologies and modern methods of construction. He is currently the recipient of a 2018 Wood Innovation Grant to demonstrate a mass timber affordable housing prototype for large-scale urban deployment. Previously, John worked for Zaha Hadid Architects for five years as a Senior Architect leading teams to design and deliver over 10,000,000 square feet of large scale buildings and skyscrapers. Additional offices include Gehry Partners and Greg Lynn Form. His work has been featured by The Economist, WIRED, The Huffington Post, The Washington Post, Popular Science and IEEE.*

**Closing Discussion: Seizing the Opportunity  
4:15 – 5:00, Room 1**

In this round table discussion, moderators Russell Edgar (UMaine) and Ricky McLain (WoodWorks) will lead an enumeration of the key lessons learned from the event to generate recommendations for future growth of mass timber manufacturing and construction in Maine and the region. Questions to be addressed include: How to grow the market for mass timber projects? What hurdles and challenges exist, and how can various technologies provide solutions? What can the attendees of this conference do to help grow the market? Panelists will include experts from various fields and/or backgrounds, while the audience will be called upon to contribute their experiences.

## Notes

### About the MMTCC:

Formed in 2017 through U.S. Economic Development Administration (EDA) funding, the Maine Mass Timber Commercialization Center (MMTCC) at the University of Maine serves to increase awareness of mass timber construction practices, and manufacturing opportunities in Maine. This is achieved through collaboration with industrial partners, trade organizations, construction firms, architects, and other groups while promoting Maine as an ideal location for mass timber manufacturing facilities.

### About WoodWorks:

WoodWorks – Wood Products Council provides free nationwide project assistance, education, and resources related to the code-compliant design, engineering and construction of commercial and multi-family wood buildings. Our experts support projects (design through construction) on a wide range of building types, including multi-family/mixed-use, education, office, commercial, industrial, civic/recreational and institutional/healthcare.



Sponsors & Exhibitors



# Conference Agenda

8:15 – 8:45 Registration & Continental Breakfast

## Morning Session: Room 1

8:45 – 9:30 Welcome & Introduction  
 9:30 – 10:30 Mass Timber in Maine and Beyond: Products, Projects and the Case for Local Timber  
*Ricky McLain and Marc Rivard, WoodWorks*

10:30 – 10:45 Break

10:45 – 11:45 Northern New England Forests: Feeding Urban Demand for Mass Timber  
*Alan Organschi, Gray Organschi Architecture (GOA) & Yale School of Architecture*

## Lunch

11:45 – 1:00 Lunch Slideshow: Maine Mass Timber Design Competition  
*Ryan Kanteres, Scott Simons Architects*

## Afternoon Session:

	Track 1 (Supply Side): Room 1	Track 2 (Demand Side): Room 2
1:00 – 1:45	SmartLam Maine <i>Casey Malmquist, SmartLam</i>	Increasing Demand for Mass Timber <i>Matt Tonello, Consigli (moderator)</i> <i>Paul Becker, Becker Structural Engineers</i> <i>Chris Carbone, Bensonwood</i> <i>Rob Dodd, Nabholz Construction</i>
1:45 – 2:30	Mass Timber Construction with Glulam <i>Liz Connor, Unalam</i>	Tall Wood Buildings and Related Code Changes <i>Benjamin Herzog, UMaine</i> <i>Matthew Hunter, American Wood Council</i>
2:30 – 2:45	Break	
2:45 – 3:30	Maine's Resources, Part 1: The Forest <i>Alden Robbins, Robbins Lumber (moderator)</i> <i>Jason Brochu, Pleasant River Lumber</i> <i>Jerome Pelletier, J.D. Irving</i> <i>Ken Laustsen, Maine Forest Service (Ret.)</i> <i>Jeff Easterling, NELMA</i> <i>Patrick Strauch, Maine Forest Products Council</i>	UMass Olver Design Bldg: From Concept to Occupancy <i>Tom Chung, Leers Weinzapfel Associates</i> <i>Peggi L. Clouston, UMass</i>
3:30 – 4:15	Maine's Resources, Part 2: The Workforce  <i>Ryan Wallace, MCBER-USM</i> <i>Mindy Crandall, UMaine</i>	Ushering in the Timber Age: Economic & Sustainable Opportunities for the 21 <sup>st</sup> Century <i>John Klein, MIT</i> <i>Frank Lowenstein, NEFF</i>

## Closing Session: Room 1

4:15 – 5:00 Closing Discussion "Seizing the Opportunity"  
*Moderated by UMaine & WoodWorks*

5:15 – 6:00 Tour of the Advanced Structures and Composites Center