



2018 Ottawa Wood Conference Speaker Abstracts and Bios

Structural Design of Mass Timber Framing Systems

Description:

Mass timber structural framing systems have high strength-to-weight ratios, are dimensionally stable, and are quickly becoming systems of choice for sustainably-minded designers. This presentation will provide a detailed look at the structural design processes associated with a variety of mass timber products, including glued-laminated timber (glulam), cross-laminated timber (CLT), and nail-laminated timber (NLT). Applications for the use of these products in gravity force-resisting systems under modern building codes will be discussed. Other technical topics will include use of mass timber panels as two-way spanning slabs, connection options and design considerations, and detailing and construction best practices.

Speaker: Tanya Luthi, M. Sc. Eng., P.E., Senior Associate, Fast + Epp

Tanya is a licensed professional engineer and a senior associate at Fast + Epp structural engineers, a Vancouver-based firm known for innovative and architecturally expressive wood structures. She served as project lead on the Mountain Equipment Co-op head office building, one of the largest contemporary timber buildings in Canada. She also co-authored a comprehensive design and construction guide for nail-laminated timber and gives frequent presentations to architects, engineers, and developers on the topic of mass timber buildings.

Tanya joined Fast + Epp's Vancouver head office in 2011 and started the firm's New York branch office in early 2016. She has a bachelor's degree in politics from Princeton University and a master's degree in civil engineering from The University of Texas at Austin.

Using Wood Where We Live, Learn, Work and Play – an Austrian Experience

Description: There are many attributes of timber that have significant opportunities and advantages to designers – aesthetics, ecology, energy efficiency, building biology, economics, building physics and strength. It is a wonder more timber is not being incorporated in structures which are actually well-suited to its use. While this presentation examines the practical applications in a variety of commercial and institutional structures in Austria, it explores how wood was used to express some emotional and creative elements as well. Dr. Ronacher's presentation delves into how wood in structures can

contribute to reducing the environmental impacts of our built environment from both structural and non structural applications. Dr. Ronacher believes if we want to strengthen our understanding of the role wood can play in our world we need to study and optimize traditional wood designs, learn from our early mistakes and constantly improve industrial technologies of fabrication and construction practices. Architect Herwig Ronacher from Austria shows a multiplicity of both public buildings and recreational/hospitality buildings all built with timber.

Speaker: Dr. Herwig Ronacher, architeketen Ronacher ZT GmbH, Austria

Dr. Ronacher is from Gmünd, in the Carinthia province of Austria within the Eastern Alps, which is noted for its mountains and lakes. He studied architecture at the Technical University of Vienna but also worked in the office of university professor E. Hiesmayr. He also served as a university assistant at TU Graz where his dissertation was about the combination of wood in massive construction. In 1984 he was accredited as an architect in Austria and has practiced continuously for almost 35 years. His is both a passionate advocate and knowledgeable practitioner of wood in design. Since he began his practice he has been involved in the planning, design and construction of more than 450 buildings, most of them constructed in wood. He is regularly asked to present and has given talks at conferences in Austria, Europe and Japan.

Midrise Cost Comparison: Steel, Concrete and Wood

Description: With the overall benefits of using wood as a building material well documented, Atlantic Wood WORKS! Studied the opportunities for a 6 storey wood construction in Atlantic Canadian centers. The research included a comprehensive market study and projections for mid-rise demand in four major centers in Atlantic Canada, a review of recent and upcoming planning changes in major Atlantic cities, and a full cost analysis that compared wood construction to three other construction methods in use in the Atlantic market using a real-life wood mid-rise structure built by an experience builder. This talk presents the findings of that direct cost comparison between steel, concrete and wood.

Speaker: Patrick Crabbe, Project Coordinator, Atlantic Wood WORKS!

Patrick was born with sawdust in his veins. He grew up working between sawmills and sales teams in a 3rd generation family business. Patrick travelled to the west coast of Canada (where the trees are bigger) and graduated with honours from the University of British Columbia with a BSc. in Wood Products Processing, major in commerce and Co-op designation. With over 10 years experience in the forest industry, in 2013 he was recruited to join the Atlantic WoodWORKS! team as project coordinator. Through executing the expansive program deliverables, Patrick educates various levels of government, architects, engineers, developers and code officials on the performance, economics and environmental benefits of wood construction.

Acoustics – Avoiding complaints and meeting/exceeding building code requirements

Description: This presentation defines building code requirements and outlines acoustic principles in addition to discussing efficient means of acoustic insulation using multiple floor/ceiling assemblies for light wood-frame and mass timber buildings. This presentation will benefit any building and design professionals such as architects, designers, acoustic engineers, builders/developers and general contractors. Material covered includes basic acoustic principles and definitions; impact and airborne sounds in wood frame buildings; means of soundproofing wood frame buildings and the do's and don't's for acoustics in buildings.

Speaker: Cristian Wallace, Business Development & Specifications, AcoustiTECH

For over 17 years, AcoustiTECH has been specializing in sound insulation of multifamily concrete, steel and wood frame buildings.

Cristian Wallace brings technical expertise, passion for working alongside architects, project managers and general contractors and a dedication to contribute to achieving new summits acoustically.

Cristian's experience combined with the expertise of his team has resulted in AcoustiTECH being the number one reference in the field of acoustics for new and existing buildings.

The Prefabricated Coffered Roof Structure at the National Arts Centre

Speaker: Jennifer Mallard, Senior Associate, Diamond and Schmitt Architects

Jennifer Mallard received a Bachelor of Architecture degree from Carleton University in 1989. She joined Diamond Schmitt Architects in 2000, becoming a, Associate in 2005 and a Senior Associate in 2015. She has been involved in many aspects of practice, in both the public and private sectors. Her project experience includes public libraries, long term care facilities, public schools, post-secondary educational facilities and performing arts centres. She has contributed to educational programs at Ryerson University and for the Museum of Civilization and has been a guest critic at OCAD and Carleton University.

At Diamond Schmitt, Jennifer has provided design and project management leadership on the Max M. Fisher Centre for the Performing Arts in Detroit; the Sidney Harman Hall, Shakespeare Theatre Company in Washington, DC, the Pierre Berton Resource Library in Vaughan, the Hudson Condominium in Toronto, the Women's Health Clinic at St Michael's Hospital in Toronto, the University of British Columbia Faculty of Law at Allard Hall, and the Daniels Spectrum Arts and Culture Center and adjacent Paintbox condominium tower in Regent Park, Toronto. She is currently Project Architect for the Architectural Rejuvenation Project at the National Art Centre in Ottawa.

Speaker: William Loasby, Senior Project Manager, Fast + Epp

William Loasby is a structural engineer and senior project manager at Fast + Epp.

He gained his structural engineering training in London, UK, after completing a degree in Engineering Science at the University of Oxford. Following two years in Australia, he lived in Hong Kong for seven years, studying for a Masters in Structural Engineering and working for the Hong Kong office of Arup.

His career has been heavily oriented towards architectural structures, involving collaborations with some of the world's leading architectural firms, which has continued following his move to Canada in 2015.

William is a chartered engineer with the Institution of Structural Engineers and the Institution of Civil Engineers in the United Kingdom, as well as a member of the Hong Kong Institution of Engineers and Engineers Australia.

A discussion of Ontario's Tall Wood Building Reference: A Technical Resource for Developing Solutions under Ontario's Building Code

Description: This session will provide an overview of Ontario's Tall Wood Building Reference, a document published by the Ontario Ministry of Natural Resources and Forestry. The Reference provides guidance for those undertaking wood building design outside of the OBC Division B prescriptive solutions, with a focus on tall wood buildings. Fire protection and structural aspects of tall wood buildings will be discussed with concentration upon the development of Alternative Solutions and navigation of the Alternative Solutions pathway provided by OBC Division A.

Further discussion will be provided highlighting the Ontario Mass Timber Program and activities currently being undertaken to promote mass timber construction in Ontario.

Speaker: Alex Nott, M.Eng., P.Eng., Ministry of Natural Resources and Forestry

Alex works as a mass timber engineer for the Ontario Mass Timber Program. Prior to this Alex spent 10 years as a structural consulting engineer, and an additional 3 years in the wood products manufacturing industry. Alex has contributed to many wood structures ranging from residential to commercial and institutional buildings, including involvement on mass timber projects such as the Art Gallery of Ontario and the Richmond Speed Skating Oval. Alex holds a Bachelor's of Civil Engineering from the University of Ottawa and a Master's in Structural Engineering from the Ottawa-Carleton Institute for Civil Engineering.