



March 23rd, 2017 Hyatt Regency, Calgary

INTERNATIONAL SPEAKERS: PRESENTATION OUTLINES & BIO'S



Leading The Way: Mass Timber in the UK, Why and How.

Dave Lomax, Senior Associate; WAUGH THISTLETON ARCHITECTS

Description: The UK is facing a housing crisis as well as a construction labor shortage. Solving our need for housing must not come at an undue cost to the environment and needs to use technologies that our de-skilled workforce can deliver quickly. We at Waugh Thistleton have been building tall, dense housing schemes in London from cross laminated timber for 15 years looking to do just that. We are now beginning to work on commercial buildings too, and moving into the next stage of off-site manufacture in timber - volumetric design.

Bio: David Lomax: is a Senior Associate at Waugh Thistleton Architects where he is currently heading up the design and delivery of the worlds largest cross laminated timber building and the practice's work on CLT volumetric housing. Waugh Thistleton are leading the international conversation on tall timber buildings and sustainable structure. Having designed what was the world's tallest CLT building at the time - Stadthaus, Murray Grove in 2009 - the practice was awarded the RIBA President's Award for Practice-located Research in the following year. The practice continues to push the boundaries of the technology, lecturing internationally and collaborating with world leading institutions such as Harvard and Cambridge Universities on teaching and research.

Alongside practice David is currently vice chair of the London Borough of Southwark Design Review Panel and is a RIBA Part 3 examiner at The Cass in addition to teaching at the London School of Architecture. He has been invited as a guest critic in a number of other leading architecture schools such the Bartlett, Oxford Brookes and UCA Canterbury at undergraduate and post graduate levels.

Design For MASS. Intelligent Delivery of MASS timber Buildings

Liam Dewar, Director EURBAN, U.K.

Description: The way we deliver buildings in the UK is changing. More reliance on digitisation, less reliance on labour-intensive construction techniques, a greater consideration of environmental issues. Sustainable buildings built quickly. MASS wood construction is a modern method of construction that can deliver to such a brief. However in order to do so successfully a different approach is required. A modern method of design is required that addresses the specific needs of the construction method, one that is both practical and effective. This presentation will discuss the challenges faced by the UK construction industry and the resultant opportunities for those involved in mass timber construction. A number of ground-breaking projects will be discussed with a particular focus on the role of the CLT specialist in delivering best practice

Bio: Liam Dewar is a founding Director of Eurban Limited, the UK's leading specialist in mass timber construction. Founded in 2003, Eurban have considerable experience in the design and assembly of mass timber structures having successfully delivered over 300 CLT structures to date.

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NORTH AMERICAN SPEAKERS: PRESENTATION OUTLINES & BIO'S



Smarter Skins & Systems for Sustainable High-Performance Buildings

Bob Marshall, P. Eng., LEED A.P., BD+C – Building Science Manager, CertainTeed SAINT-GOBAIN

Description: Discover new 2015 NBC and NECB fire, sound control and energy efficient solutions including all new Code requirements for Apparent Sound Transmission Class (ASTC) for healthy Habitat. These Codes are mandated by Port of Vancouver and are being adopted by many authorities. We will share North America leading research results from our NRC work on innovative ASTC alternative Code solutions and Indoor Environmental Quality. The new ISO IEQ standard will be covered.

These smart innovative fire & sound control and IEQ system solutions can be applied to Part 3 multi-unit mid-rise and tall wood buildings resulting in healthy and affordable sustainable habitat.

Bio: Bob Marshall: has 40 years of experience as a building specialist. He is co-author of LEED Durable Building with Dr. Ray Cole. He's appointed to NRC's NECB Standing Committee, as an expert for ISO standards and understands litigation. He was retained by the BC Ministry of the Attorney General as an expert on the \$1.5B Leaky Condominium Class Action that was dismissed.



Sound Insulation of Wood-Frame Buildings

André Rioux, Vice President, AcoustiTECH, St. Lambert-de-Lauzon, QC

Description: This presentation outlines basic acoustic principles and definitions, specifically the transfer of impact and airborne sounds in wood-frame buildings. Efficient means of acoustic insulation will be discussed using multiple case studies of recent floor-ceiling assemblies.

This presentation will benefit any professional such as architects, designers, acoustic engineers, builders, general contractors interested and/or concerned with acoustic insulation of wood-frame buildings.

Bio: André Rioux: Since the creation of AcoustiTECH in 2000, Andre has been traveling all over Canada, the United States and the UAE to make presentations to groups of architects, project managers, general contractors, flooring contractors and more.

Andre'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.

After over 15 years, Andre continues to enjoy meeting with professionals and collaborating in the success of their projects.

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Calgary Schools of Heavy Timber Construction

Reid Costley, P. Eng. Buildings Discipline Manager; ISL

Description: Two schools located in the Calgary neighborhoods of McKenzie Towne and New Brighton for the Calgary Board of Education are the CBE's first use of Heavy Timber and Cross-Laminated Timber (CLT). With a total gross floor area of 8181 square meters per school, these two-storey structures, were designed from start to tender in 64 days and came back from the marketplace a total of \$3M under budget.

The opportunities and challenges of a new type of school construction as well as a tight design timeline will be discussed. Design and construction triumphs and, just as importantly, lessons learned, will be discussed. The session will be presented by the structural engineer however it is not intended to be a structural engineering discussion. The session will also be of interest to architects, contractors, project managers and educators as well anyone interested in what happens when you deliver an innovative project following traditional means and methods

Bio: Reid Costley: is responsible for leading and managing ISL's Buildings group in the delivery of building projects for public and private sector clients. As a founder of Cascade Engineering Group, now part of ISL Engineering he is a leader in wood design and innovation. Reid is the Structural Engineer of Record for this project

Recent Research and Development in Mass Timber Panels

Y. H. Chui, PhD, P.Eng, Professor



Description: Cross laminated timber (CLT) is part of a relatively new category of engineered wood product known as Mass Timber Panels that has allowed wood to be considered as a viable structural material for high-rise buildings. The Canadian wood design standard, CSA O86-14, has recently been updated to include design specifications for CLT.

This presentation will provide an overview of the new CLT design provisions and recent Canadian research efforts in the development of innovative mass timber panels and improvement of structural performance of CLT structural systems.

Bio: Dr. Chui: is Professor of Timber Engineering at University of Alberta. He is a member of a Standing Committee of the National Building Code of Canada, and a number of CSA technical committees on design of timber structures and wood products. He is also Vice-Chair of ASTM Technical Committee D.07 'Wood', and represents Canada on the ISO TC 165 Technical Committee 'Timber structures'.

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Rocky Ridge Recreation Facility

Description: The project team at Rocky Ridge Recreation Facility including GEC, RJC, ISL and PCL will share their collaborative experiences constructing the largest wood roof structure in North America. The presentation will showcase the project's success story from the perspective of the Prime Consultant, Structural Design Consultant, Specialty Design Support Engineer and Construction Manager and will include the following topics:

Design Concept, Inspiration, Optimizing 3D models, Wood Structure Design Scheme, Minimizing Design & construction Costs, Overall Project Challenges, Creating an environment for success through Construction Planning, and Lean Construction.

Bio's:



Ilian Ho, PCL: Has solid foundation in all aspects of major operations of the construction industry. Ilian has a passion for large scale complex construction projects and has been a part of the Canadian Museum of Human Rights in Winnipeg, YYC Runway Development Project and the Rocky Ridge Recreation Facility. His strengths are in team work, adaptability, innovative problem solving, BIM technology, project planning & execution, risk management and providing the overall best value for the client.



Adrian Benoit, GEC Architecture: Adrian is an Associate with GEC Architecture and the design architect on Rocky Ridge Recreation Facility. Within the past 8 years, Adrian has been the design architect of many of GEC's largest and most high profile projects primarily focusing on recreation, multi family and transit oriented development projects.



Mark Ritchie, RJC Consulting Engineers: Mark's strong project management skills, combined with his depth of technical knowledge, make him a strong Lead Engineer. He has worked on a wide variety of projects in both Canada and the United States. His work includes the design and construction of recreation facilities, low and high rise residential and office towers, and parkades

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CWC / WW SPEAKERS: PRESENTATION OUTLINES & BIO'S



Wood Products - Climate Change & Carbon Benefits

Adam Robertson, M.A.Sc, P.Eng. Manager, Codes and Standards (Structural Engineering and Sustainability)

Description: The evolution and linkages between contemporary climate change mitigation strategies at the global, national, provincial and municipal levels will be discussed. The carbon benefits of using wood products will be explored, including forests as carbon sinks, wood building products as long-term carbon storage devices and emissions reductions through product substitution. Design considerations and decision-making related to both embodied and operational GHG emissions is becoming an increasingly more important requirement in the building sector. Free tools and resources to help understand and quantify GHG reductions in the built environment will be showcased.

Bio: Adam Robertson: Adam completed his B.A.Sc. in Civil Engineering at the University of Toronto and also holds a M.A.Sc. from the Department of Wood Science at the University of British Columbia. Previously, he was employed as a consulting engineer and has also worked in construction management. Adam joined the CWC in 2011 and was a primary developer of the Online Carbon Calculator.



The Canadian Wood Council's interactive Wall Thermal Design calculator

Robert J. Jonkman, P.Eng. Director Codes and Standards - Structural Engineering

Description: The Canadian Wood Council's (CWC) interactive Wall Thermal Design (WTD) calculator is a free tool to help designers comply to the new energy requirements. The calculator enables designers to explore options, compare features, and determine a suitable wall assembly that can perform across a range of Canadian climates. This free online tool (www.cwc.ca/wtd) provides effective R-values for wall assemblies and includes a durability assessment that considers computer modeling and field experience.

Bio: Robert Jonkman: Completing a Bachelor of Civil Engineering and Management degree in 1994, Rob worked as a structural engineer for ten years before joining the Canadian Wood Council's Codes and Standards division in 2005, progressing to "Director, Codes and Standards - Structural Engineering" in 2014.

Concentrating on structural engineering, building science, and energy issues, Rob is responsible for the Publication and Software business centre and participates on building code and standard committees.



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Find your Design Inspiration: A showcase of Wood Design Award winners from 2015-16

Marianne Berube, Executive Director, Ontario Wood WORKS!, North Bay, ON

Lynn Embury Williams, Executive Director, Wood WORKS! BC, Vancouver, BC

Description: Find your wood design inspiration. The projects featured in this presentation showcase innovative uses of wood in both commercial and residential designs. Unique one-of-a-kind buildings will be presented, as well designs that can be easily and cost-effectively replicated.



Bio: Marianne Berube: lives and works in North Bay, Ontario. She graduated from Nipissing and York Universities with degrees in Environmental Science and Business. She has extensive experience within the Finance, Construction and Wood industries. Marianne sits on several boards and is currently Chair of Nipissing University's Board of Governors.



Bio: Lynn Embury Williams: Previously the Director of Marketing and Business Development at Canfor, Lynn brings a wealth of experience and expertise in the areas of marketing and business development.

She is also presently the Chair of the NEWBuildS Forestry Network Program, with a goal of advancing scientific knowledge and construction technologies that will enable wood-based