

SFPE Southern Ontario (The Southern Ontario Chapter of the Society of Fire Protection Engineering) is happy to be hosting our 2<sup>nd</sup> Annual Fire Protection Symposium in partnership with the PEO. Last year's inaugural event was a success and raised over \$1,000 for local charities. We look forward to this year's event being even bigger and continuing to promote fire protection education while supporting local charity.

The details of the event are included below. We will have 8 speakers discussing eight current topics of interest for the fire protection engineering industry, all related to the tall/high rise buildings.

TOPIC	Time	Speaker / Speakers
Introduction to meeting	9:00 am-9:15 am	Christian Bellini (President PEO), David Laks (VP & Program Chair – SPFE-SOC), Jim Chisholm (Toronto Fire Services)
Fire-fighting issues in high rise buildings	9:15 am-9:45 am	William Baker, Division Chief, TFS. Intro – Jim Chisholm
Water supply issues for high rise buildings (standpipe, hoses, pressure, pumps, high water fire tank)	9:45 am-10:15am	William Baker, Division Chief, TFS.
<b>Break</b>	<b>10:15-10:30</b>	
Combustible Exterior Wall Assemblies: Risks, Requirements, and Methods of Evaluation	10:30 am-11:15 am	Daniel Martin, Fire Protection Engineer with Jensen Hughes
How insurance companies rate fire risk of heavy timber construction and EIFS (Exterior Insulation Finishing Systems) in tall buildings	11:15-11:50 am	Josef Pruellage, Risk Mgmt./Loss Control, Aviva & David Laks, VP Risk Services, HUB International
<b>Lunch</b>	<b>11:50 am - 12:30pm</b>	
Advice on Use of the SFPE Guide to Fire Protection in very tall buildings and principles behind its development.	12:30 pm-1:15 pm	Jim Quiter, Principal of Arup (ret.), a global engineering firm. Chair of group that developed latest edition of SFPE "Guide for Very Tall Buildings." Intro Derek Gruchy.
Demystifying Tall Wood Buildings– Case Studies	1:15 pm -2:00 pm	Jack Keays, Vortex Fire Consulting Inc. Intro. Jim Chisholm
<b>Break</b>	<b>2:00 pm-2:15 pm</b>	
1. fire-resistance rating for mass timber elements in tall wood structures 2. fire-resistance design of exposed timber structures	2:15 pm-2:45 pm	Marc Alam, Manager Codes Standards, Fire Division. Canadian Wood Council
AHJ inspection of high rise buildings – what are critical items?	2:45 pm -3:30 pm	Captain Chris McLellan, Toronto Fire Services Intro – Jim Chisholm
Closing Remarks	3:30 pm to 3:40 pm	David Laks & PEO Chapter rep.

Bios of each speaker are included on the following pages.

All proceeds will be donated to our local charities as with all our events this year.

We hope this year has been as interesting as we think it has been; thank you to all of our speakers and to each attendee who supported these events! Our industry thrives with the energy and passion you display for life safety!

If you have any questions, comments, or feedback with respect to our 2021-2022 season, we would love to hear from you. Please feel free to contact any of our Executive Committee. We look forward to hearing from you and look forward to seeing you (virtually) in the near future.

Sincerely,

**Your 2021-2022 Chapter Executive Committee**

**Society of Fire Protection Engineers: Southern Ontario Chapter**

## SPEAKER BIOS:

### William Baker

Toronto Fire Service: Division Chief



**Speaker Bio:** William Baker has over thirty one years of experience with Toronto Fire Services (TFS); twenty-seven and a half in Operations and the last three and a half years in Training. He has progressed from Firefighter to Captain in the Operations Division and then to Division Chief in the Training Division. He was behind the biggest change in high-rise firefighting that TFS has ever seen. The 38mm high-rise pack (fog nozzle) was replaced with 65mm Hose Packs and Standpipe Kits (smooth bore nozzle). He was also instrumental in the improvement of TFS firefighting equipment, such as:

- Design and procurement of two Highrise Response Vehicles
- Upgraded existing combination nozzles to improve flow and extinguishment capabilities
- Procured new 700 lpm smooth bore nozzles as an additional attack tool
- Extensive testing of 45mm and 65mm jacketed hose with culmination of a new hose spec for TFS resulting in the procurement of industry best jacketed hose
- Procurement of specialty nozzles for residential balloon frame construction as well as, high-rise buildings
- Trialing of new tools including the New York Hook and the Roof Operations Safety Platform (ROSP)
- Redesign of hose beds for TFS apparatus and fire hose deployment options for both pre-connect and static dead loads

Redesign of Pump inlets also known as suction ports for increased water supply capabilities

**Presentation Titles:** Fire-fighting issues in high rise buildings & Water supply issues for high rise buildings (standpipe, hoses, pressure, pumps, high water fire tank).

**Presentation Abstract:** How Toronto Fire Services (TFS) deals with catastrophic failures of the standpipe system from the Fire Department Connection (FDC) all the way to the standpipe header and valve connection known primarily as the Fire Hose Cabinet (FHC). Deal with firefighting issues as a result of loss of water to any standpipe equipped building due to mechanical failure or malicious conduct. TFS is working on twelve tactics to overcome these failures.

Post 93 NFPA 14 - Changes and how they effected the Fire Service. Meridian Plaza fire of 1991 alerted fire services in North America to design limitations of both Standpipes and Firefighters primary attack packages for standpipe equipped buildings.

## Daniel A. Martin, PE, CFEI, CVFI

Jensen Hughes: Fire Protection Consultant



**Speaker Bio:** Daniel Martin is a Fire Protection Engineer with over 6 years of experience at Jensen Hughes related to building code consulting, fire testing, passive fire protection engineering, code development, and fire investigation. Mr. Martin specializes in fire performance and flame spread analysis of exterior wall assemblies containing combustible materials for compliance with NFPA 285 by performing engineering evaluations and as a fire test consultant during qualification testing. Mr. Martin is also a member of the NFPA Fire Test Committee, NFPA Building Construction Committee, and participates in the ICC code development process.

**Presentation Title:** Combustible Exterior Wall Assemblies: Risks, Requirements, and Methods of Evaluation

**Presentation Abstract:** This presentation will discuss exterior wall assemblies containing combustible components. Topics include learning the basics of the fire test standards (ULC S134 and NFPA 285), relevant building code requirements (IBC), what to look for while reviewing exterior wall designs, and design considerations learned from years of testing.

David Laks, P. Eng., CFPS, ARM, RRC & Josef Pruellage,  
HUB International: VP Risk Services Aviva Canada, Mgr. Tech.  
Services Risk Services



**Speaker Bio:** David Laks is VP/Risk Control Services Manager Eastern Canada on the HUB International Risk Services team. He brings 30 years of experience in risk control consulting. He develops and implements solutions in the areas of property loss control, building envelop analysis, risk mitigation, construction management, training, business continuity, and regulatory compliance. Prior to joining HUB, Mr. Laks was the Loss Control Manager with a Fortune 100 food manufacturing company responsible for all aspects of property risk management. Currently, Mr. Laks is a member of the National Fire Protection Association (NFPA), Professional Engineers of Ontario (PEO), Society of Fire Protection Engineers (SFPE) – Ontario Chapter, and the Roof Consultants Institute (RCI).

David is current serving on the Executive Committee of the SFPE Southern Ontario Chapter, as Program Chair/VP. Certifications/Licenses: P. Eng. (Professional Engineer); Certified Fire Protection Specialist (CFPS); Registered Roof Consultant (RRC), Associate in Risk Management (ARM).

**Speaker Bio:** Josef Pruellage is a Risk consultant at Aviva with over 15 years in risk control consulting as well as another 9 years in Industry in various management and engineering roles. He develops and implements solutions in the areas of property loss control, business continuity, product liability, general liability, equipment/machine maintenance, auto/fleet management, training and regulatory compliance. Prior to joining Aviva, Joe was a Risk Control Consultant at several leading insurers and brokers (including Aviva, Allianz, FM Global, CNA and HUB International) responsible for property, auto/fleet, general liability, product liability and business interruption reviews/surveys.

**Presentation Title:** How insurance companies rate fire risk of heavy timber construction and EIFS (Exterior Insulation Finishing Systems) in tall buildings

**Presentation Abstract:** The insurance industry has their own method for evaluating the fire risk for a particular construction, which can differ from local/federal building and fire codes. Joe and David will discuss these differences, which can be critical for designers/AHJ to understand so their clients do not get any surprises when the insurance premiums are provided for these occupancies.



## Jim Quiter

Arup: Principal (ret.)



**Speaker Bio:** Jim Quiter recently retired as a Principal of Arup (a global engineering firm) having last served as the Group Leader of their Los Angeles office. He chaired the task group that developed the 2<sup>nd</sup> edition of the Guide for Very Tall Buildings. He is a former President of SFPE. He is also a member of the NFPA Standards Council, Chair of the NFPA High-rise Building Safety Advisory Committee, author the High-rise chapter in the NFPA handbook, and past chair of the NFPA Safety to Life Correlating Committee.

**Presentation Title:** Advice on Use of the SFPE Guide to Fire Protection in very tall buildings and principles behind its development.

**Presentation Abstract:** This presentation will provide information and advice on the use of the SFPE Guide to Fire Protection in very tall buildings, and some of the principles behind its development. It will review the thought process that is necessary to design a very tall building, and provide several examples of the key decisions that must be made, and how they inter-relate with one another. The presentation will also devote time to the changes made and additions to the second edition, particularly those related to the building envelope.

## Jack Keays, P. Eng.

### Vortex Fire



**Speaker Bio:** Jack is an accomplished fire safety engineer, building code expert and mass timber innovator with extensive project experience in Canada, Singapore, Middle East, and North Africa. Jack has advanced analytical skills with the ability to recognize and address fire safety challenges while developing practical engineering solutions.

With each project, Jack engages both internal and external stakeholders in constructive and collaborative relationships. Jack brings value to each project by taking a holistic approach to fire and life safety and by working closely with a cross section of disciplines to deliver optimal solutions.

**Presentation Title:** Fire Design Considerations for Tall Wood Buildings – case study

**Presentation Abstract:** Wood is a low-cost, efficient, and renewable structural material. Today, light wood frame is commonplace in construction up to six storeys tall, but code restrictions have not allowed taller wood buildings—until recently. In Canada’s 2020 National Building Code, a new construction type called Encapsulated Mass Timber Construction (EMTC) is being introduced, permitting mass timber to be used for buildings up to 12 storeys. This presentation will discuss the key schematic design considerations and code implications of designing tall wood buildings through examination of several case studies.

## Marc Alam

### Canadian Wood Council: Manager of Codes and Standards – Fire



**Speaker Bio:** Marc Alam is a member of the Canadian Wood Council. As Manager, Codes and Standards in the fire division, Marc assists through participation in CWC’s building code and standards fire and acoustic related initiatives and the development of CWC’s fire design tools, as well as code-related fire and acoustic research projects.

**Presentation Title:** Fire Resistance of Mass Timber Products

**Presentation Abstract:** This seminar will discuss various sources of information and tools that may be used to develop solutions to meet the building code’s fire-resistance rating requirements for buildings using mass timber construction. This includes the new acceptable solution in the 2020 NBC called Annex B from CSA O86 Engineering Design in Wood, entitled “Fire resistance of large cross-section wood elements,” for solid-sawn timber, glued-laminated timber (glulam) and structural composite lumber (SCL), and cross-laminated timber (CLT).

## Chris McLellan

Captain: Toronto Fire Services



**Speaker Bio:** Chris McLellan has worked for Toronto Fire Services for 14 years and is currently a training Captain in the Professional Standards section. Eleven of those years were spent as a Fire Prevention Inspector. Chris teaches existing staff and new recruits on the Fire Protection and Prevention Act, Fire Code, Building Code, legal concepts, fire protection systems and NFPA 1031 certification.

Chris is a graduate of Seneca College's School of Fire Protection Engineering Technology and enrolled in the University of Cincinnati's Bachelor of Fire Science program.

**Presentation Title:** AHJ inspection of high rise buildings – what are critical items?

**Presentation Abstract:** This presentation will focus on high rise residential buildings as they relate to the fire code. Specifically, we will discuss retrofit requirements and common maintenance issues related to fire protection equipment, fire routes and fire separations.