



**Contact Details**

Meacham Associates  
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**Representative Positions Held**

2008 – present, *Meacham Associates*, Managing Principal  
 2008 – 2017 *Worcester Polytechnic Institute*, Associate Professor  
 2000–2007 – *Arup*, Principal; Global Leader – Risk Consulting Practice; Business Leader – Management Consulting (Americas); Business Leader – Risk & Security (Americas); Fire Engineering Consultant  
 1995–2000 – *SFPE*, Research Director and Technical Director

**Qualifications**

P.E., Massachusetts, 47238  
 P.E., Connecticut, 17906  
 Chartered Engineer, UK, Institution of Fire Engineers, 519749  
 EUR ING, FEANI, Europe, 34094  
 Ph.D., Risk and Public Policy, Clark University  
 M.S., Fire Protection Engineering, Worcester Polytechnic Institute  
 B.S., Electrical Engineering, Worcester Polytechnic Institute

**Professional Memberships**

International Association for Fire Safety Science (Chair, 2021-23)  
 Institution of Fire Engineers  
 Society of Fire Protection Engineers  
 National Fire Protection Association

**Key Data**

Brian is Managing Principal of Meacham Associates, a firm that provides risk-informed performance-based solutions to complex building and infrastructure challenges, consults on building and fire regulatory systems, and undertakes research in these and related areas.

Brian has more than thirty-five years of international experience helping public- and private-sector organizations tackle challenging fire engineering, risk, and regulatory issues. His experience includes performance-based fire engineering analysis, design and peer review; risk and regulatory consulting; research; and multi-hazard threat, vulnerability and risk assessments.

Brian is widely recognized as an authority on risk-informed performance-based approaches to engineering and regulation, having undertaken research, participated in the development of guidance documents, authored numerous publications, and consulted to governments world-wide.

**Awards, Recognition, Appointments**

Fellow, IFE  
 Fellow, SFPE  
 Fulbright Global Scholar Awardee  
 ICC 2017 Global Award  
 SFPE Harold E. Nelson Service Award  
 Chair, NFPA TC Fire Risk Assessment  
 Expert, US TAG, ISO TC92 SC4

**Representative Recent Projects**

*International Code Council (Washington, DC)*. Contracted to undertake research into current views on performance-based building codes and design methods and to recommend a path forward for a reimagined ICCPC (2021 – )

*Boverket (Karlskrona, Sweden)*. Contracted to provide expertise on restructuring of performance-based building regulations and on stakeholder engagement in the process (September 2020 - ).

*World Bank (Washington, DC)*. Contracted as Senior Consultant to the World Bank to develop Urban Fire Regulatory Assessment and Mitigation Effectiveness (Urban FRAME) diagnostic tool for low- and middle-income countries (2019/20).

*Fire Protection Research Foundation (Quincy, MA)*. Research on fire safety impacts of ‘green’ buildings and attributes. With Lund University (January–November 2020).

*Lund University (Lund, Sweden)*. Development of a Research Roadmap for Environmental Impacts of Fire. For Fire Protection Research Foundation (Nov 2019 – April 2020).

*Knauf Insulation (Vise, Belgium)*. Contracted to provide expert services related to building regulatory requirements for fire safety and associated standardized fire test methods (April 2019 – March 2020)

*TNO (Delft, the Netherlands)*. Contracted to provide expert consulting services on human behavior and evacuation during fire and extreme events (2019)

*Port Authority of New York and New Jersey, (New York, NY)*. Contracted to lead peer-review services for a performance-based design of a high-hazard facility. Sub-contractor to Mott MacDonald (March 2018 – )

*Lund University (Lund, Sweden)*. Research on oxygen reduction systems for fire. For Fire Protection Research Foundation (May 2018 - ).

*International Code Council (Washington, DC)*. Development of a document on the benefit of building codes for increasing community resiliency (March – September 2018).

*Scottish Government, Building Standards Division (Edinburgh, Scotland)*. Contracted to conduct research into the options for a centralized hub for verification of fire engineering designs (Feb–June 2018).

*World Bank (Washington, DC).*

Engaged as Senior Consultant to the World Bank, *Building Regulation for Resiliency* project, to develop building regulatory capacity assessment approach for low- and middle-income countries, and to undertake building regulatory capacity assessments (2016 -).

*Australian Building Codes Board (Canberra, ACT, Australia).*

Contracted to develop report on threshold tolerable risk levels for inclusion into the National Construction Code (2015 – 16).

*Parsons Brinckerhoff, Inc. (New York / Atlanta).*

Contracted to support development of HRR data for CFD modeling of rail vehicle, review CFD modeling methodology report and prepare a review report (2016 – 17).

*Confidential Client (MA).* Survey and assessment of regulatory compliance of fire separation/compartimentation in residential building. Involved code review, site survey, and written assessment (2013).

*Studio di Architettura (Milan, Italy) and Novartis (East Hannover, NJ).*

Code consulting and fire engineering alternatives analysis for building in New Jersey (2012).

**Representative Past Projects\****\*Aedas / Marina Bay Sands*

(Singapore). Project Director and Principal Risk Consultant for a comprehensive TVRA.

*\*Confidential Client.* Security, Terrorism, Fire and Life Safety advisor for the design for a super-tall building. Advised on issues ranging from response to deliberate events to strategies for fire and life safety in super-tall buildings.

*\*Confidential Client.* Project Director for a comprehensive review of hazards and risks associated with the design of a new corporate headquarters building of a financial services firm in NYC.

*\*Miami International Airport, Rental Car Facility, (Miami, FL).* Principal Risk and Fire Consultant for \$40 Million consolidated rental car facility at the MIA.

*\*Port Authority of New York and New Jersey, (New York, NY).* Principal Risk Consultant for a proposed PANYNJ facility in lower Manhattan. Led a TVRA for defined areas.

*\*New York City Transit, (New York, NY).* Principal Risk Consultant for \$750 Million Fulton Street Transit Center in Manhattan. Led security TVRA and Risk and Opportunities Register effort for estimating and tracking risks for PM team.

\*Project experience with previous firms

**Representative Publications**Books & Book Chapters

Meacham, B.J. *Building Community Resilience Through Modern Building Codes*, ISBN: 978-1-60983-867-6, ICC, Washington, DC, 2018.

Fitzgerald, R.W. and Meacham, B.J., *Fire Performance Analysis for Buildings*, John Wiley & Sons, 2017.

Meacham, B.J., Johnson, P.J., Charters, D. and Salisbury, M., "Building Fire Risk Analysis," Chapter 75, *SFPE Handbook of Fire Protection Engineering*, 5<sup>th</sup> Ed., Springer, 2015.

Tubbs, J. and Meacham, B.J., *Egress Design Solutions: A Guide to Evacuation and Crowd Management Planning*, John Wiley & Sons, 2007.

Meacham, B.J., Editor, and Johann, M., Associate Editor, *Extreme Event Mitigation in Buildings: Analysis and Design*, National Fire Protection Association, Quincy, MA, 2006.

Project Reports

*Developing a global standard for fire reporting*, RICS, London, Dec 2020.

*Fire Safety Challenges of 'Green' Buildings and Attributes*, FPRF, Quincy, MA (with McNamee), November 2020.

*Urban Fire Risk Assessment and Mitigation Evaluation (Urban FRAME) Diagnostic*, World Bank, Washington, DC, (with Moullier et al.), November 2020.

*Environmental Impact of Fire – Research Roadmap*, FPRF, Quincy, MA, USA, February 2020 (with McNamee, et al.),

Peer-Reviewed Papers

Meacham, B.J., van Straalen, I.J. and Ashe, B. "Roadmap for incorporating risk as a basis of performance objectives in building regulation," *Safety Science*, 141, 2021.

Meacham, B.J., Stromgren, M. and van Hees, P., "A Holistic Framework for Development and Assessment of Risk-Informed Performance-Based Building Regulation," *Fire & Materials*, DOI:10.1002/fam.2930, 2020.

Meacham, B.J. and van Straalen, I., "A Socio-Technical System Framework for Risk-Informed Performance-Based Building Regulation," *Building Research & Information*, 2017.

Jutras, I. and Meacham, B.J., "Development of objective-criteria-scenario triplets and design fires for performance-based Fire Safety Design," *Journal of Building Engineering*, 2016.

Martin, D., Tomida, M., Meacham, B.J., "Environmental Impact of Fire," *Fire Science Reviews*, 2016.

Meacham, B.J., "Post-Earthquake Fire Performance of Buildings: Summary of a Large-Scale Experiment and Conceptual Framework for Integrated Performance-Based Seismic and Fire Design," *Fire Technology*, Volume 52, Issue 4, pp 1133–1157, 2015.

Alvarez, A., Meacham, B.J., Dembsey, N.A. and Thomas, J.R., "A Framework for Risk-Informed Performance-Based Fire Protection Design For The Built Environment," *Fire Technology*, Vol. 50, pp161-181, 2014.