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, 19706

Chartered Engineer, Institution of Fire Engineers (UK)

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

Institution of Fire Engineers

Society of Fire Protection Engineers

National Fire Protection Association

Society for Risk Analysis

Key Data

Brian is Managing Principal of Meacham Associates. The firm has two primary focus areas: risk-informed performance-based fire safety solutions for a broad range of facility, operational and infrastructure risks; and building regulatory systems review, capacity assessment, and development.

Brian has more than thirty years of international experience helping public- and private-sector organizations tackle challenging risk, fire engineering and regulatory issues. This experience includes multi-hazard threat, vulnerability and risk assessments for buildings and critical infrastructure, advising on the use of risk as a basis for regulation, assessment of organizational resilience, strategic planning, fire hazard and risk assessment, and engineering analysis and design.

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

Fulbright Global Scholar Awardee

Fellow, SFPE

Fellow, IFE

SFPE Harold E. Nelson Service Award

Chair, NFPA Technical Committee, Fire Risk Assessment

Chair, US TAG, ISO TC92 SC4

Representative Consulting Projects

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.

Australian Building Codes Board (Canberra, ACT, Australia). Contracted to develop report on threshold tolerable risk levels for inclusion into the National Construction Code.

Scottish Government, Building Standards Division (Edinburgh, Scotland). Contracted to make recommendations on a professional qualification system for verifiers.

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.

Studio di Architettura (Milan, Italy) and Novartis (East Hannover, NJ). Code consulting and fire engineering alternatives analysis for building in New Jersey.

Arup (Westborough, MA). Expert Consultant for fire risk assessment (FRA) of an electrical power utility

**Public Utilities Commission (San Francisco, CA).* Technical Advisor on project to review, consolidate and expand emergency response and recovery plans for a water utility.

**Aedas / Marina Bay Sands* (Singapore). Project Director and Principal Risk Consultant for a comprehensive threat, vulnerability and risk assessment the Marina Bay Sands Integrated Resort design.

**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, and for the development of a report on risk mitigation measures for the design.

**Miami International Airport, Rental Car Facility, (Miami, FL).* Principal Risk and Fire Consultant for a $40 Million project to design and construct a consolidated rental car facility at the Miami International Airport. Responsibilities included system safety assessment, performance-based fire and life safety analysis, fire hazard and risk assessment and development of fire and explosion mitigation strategies.

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

**SonoSite, Bothell, WA.* Project Director for this effort to assess and update the Business Continuity Plan and to develop Emergency Response and Recovery and Crisis Communication and Management plans for this manufacturing facility in an earthquake prone area.

**New York City Transit, (New York, NY).* Principal Risk Consultant for the design of the $750 Million Fulton Street Transit Center in lower Manhattan. Led a security TVRA and a risk assessment and management effort for the project management team, which included a Risk and Opportunities register for estimating and tracking project financial risks.

**Sandoz (Switzerland).*
Recommended modifications to fire safety standards and procedures for chemical warehouse facilities. The focus was to identify a performance-based approach as an alternative to prescriptive requirements.

**Tungsram /G.E. Lighting (Hungary)*.
Undertook fire hazard and qualitative risk analyses of five light bulb manufacturing facilities and developed a fire safety master plan to address hazards and risks.

*Indicates project experience prior to establishing Meacham Associates

Representative Publications

Books

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

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.

Handbook Chapters

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

Papers

Meacham, B.J. and van Straalen, I., "A Socio-Technical System Framework for Risk-Informed Performance-Based Building Regulation," *Building Research & Information*, DOI 10.1080/09613218.2017.1299525, on line 30 March 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*, online 4 Sep 2016, http://dx.doi.org/10.1016/j.jobe.2016.09.002.

Martin, D., Tomida, M. and Meacham, B.J., "Environmental Impact of Fire," *Fire Science Reviews*, 5:5, DOI 10.1186/s40038-016-0014-1, on-line 8 September 2016.

Meacham, B.J., "Towards a Risk-Informed Performance-Based Approach for Post-Earthquake Fire Protection Design of Buildings," *Fire Science and Technology 2015*, May 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, 30 July 2015.

Almejmaj, M. and Meacham, B.J., "The Effects of Cultural Differences between the West and Saudi Arabia on Emergency Evacuation – Overview of Problem and Analysis of Clothing on Walking Speed," *Fire & Materials*, Volume 39, Issue 4, pp353–370, DOI: 10.1002/fam.2227.

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*, DOI 10.1007/s10694-013-0366-1, Vol. 50, pp161-181, 2014.

Schebel, K., Meacham, B.J., Dembsey, N.A., Johann, M., Alston, J. and Tubbs, J., "Fire Growth Simulation in Passenger Rail Vehicles Using a Simplified Flame Spread Model Coupled with a CFD Fire Model," *Journal of Fire Protection Engineering,* Vol. 22, Issue 3, pp. 197 – 225, 2012

Meacham, B.J., Dembsey, N.A., Johann, M., Schebel, K. and Tubbs, J., "Use of Small-Scale Test Data to Enhance Fire-Related Threat, Vulnerability, Consequence and Risk Assessment for Passenger Rail Vehicles," *Journal of Homeland Security and Emergency Management*, Vol 9, Iss. 1, 2012.

Representative Committees

ISO TC92 SC4 – Fire Safety Engineering, Chair – US Technical Advisory Group

NFPA Technical Committee on Fire Risk Assessment Methods, Chair

Inter-jurisdictional Regulatory Collaboration Committee (IRCC), Past President. (www.ircc.info)