



RESEARCH FOUNDATION

RESEARCH FOR THE NFPA MISSION

Symposium on Fire Protection for a Changing World

FINAL BRIEF BY:

Amanda Kimball, P.E.

Fire Protection Research Foundation
Quincy, Massachusetts, USA

Held: 18 April 2016, Holiday Inn Munich City Centre, Hochstrasse 3,
Muenchen, Germany

July 2016

© 2016 Fire Protection Research Foundation

1 Batterymarch Park, Quincy, MA 02169-7417, USA
Email: foundation@nfpa.org | Web: nfpa.org/foundation

FOREWORD

As the world continues to become more technologically advanced there becomes the need for identifying emerging trends that can both benefit and hinder the fire service. Everyday new scientific information is published that can greatly assist many important industries related to fire protection. In order to identify significant areas of interest to the fire protection industry, NFPA and the Fire Protection Research Foundation sponsored the *Symposium on Fire Protection for a Changing World*. This one day international symposium consisted of a handful of presenters who provided advanced information on a number of concentrations within the fire protection industry. Topics included emerging fire protection applications, concepts, and methods, fire protection challenges of new hazards, and big data for fire protection applications. Attendees and presenters represented a cross-section of industry, academia, insurance, and the fire service.

As seen in the agenda below, thee specific topics discussed at the symposium included trends impacting fire protection, economic and environmental impacts of fire events, intelligent buildings, tall wood buildings, photovoltaic systems, lithium-ion batteries, and many more. All presentations from the event can be found on the [Foundation's website](#).

0800 - 0845	Registration, Morning Coffee
0845 - 0900	Welcome and Conference Overview
	Session I - Keynote Presentations
0900 - 0930	Trends Impacting Fire Protection
	<i>Dr. Guillermo Rein, Imperial College, UK</i>
0930 - 1000	Emergency Responder Perspective for the 21st Century
	<i>Chief Albrecht Broemme, Federal Agency for Technical Relief, Germany</i>
1000 - 1030	Coffee Break
	Session II - Emerging Applications, Concepts, & Methods
1030 - 1100	Economic and Environmental Impacts of Fire Events
	<i>Dr. Francine Amon, SP, Sweden</i>
1100 - 1130	Intelligent Building Design for the 21st Century
	<i>Peter Weismantle, Adrian Smith + Gordon Gill Architecture LLP, USA</i>
1130 - 1200	Fire Protection for Tall Wood Buildings
	<i>Birgit Östman, SP, Sweden</i>
1200 - 1300	Luncheon
1300 - 1330	New Technology for Sprinklered High-Challenge Warehouses
	<i>Christina Francis, P&G, USA</i>
	Session III - Fire Protection Challenges of New Hazards
1330 - 1400	Wind Turbine Fire Protection
	<i>Prof. Dipl.-Ing. Henry Seifert, Hochschule Bremerhaven; University of Applied Sciences, Germany</i>

1400 - 1445	Photovoltaic Systems: US and European Perspective
	<i>Richard Gallagher, Zurich Services Corporation, USA and Marc Van de Velde, XL Caitlin, Germany</i>
1445 - 1515	Electrical Energy Storage: Lithium-Ion Batteries
	<i>Ben Ditch, FM Global, USA</i>
1515 - 1545	Coffee Break
	Session IV - Big Data for Fire Protection Systems
1545 - 1700	Panel Presentations and Discussion (20 minutes each presentation)
	<i>John Bonney, Alendi Consulting Ltd. (UK); Nicky Van Oorschot, Netages (Netherlands); Matt Klaus, NFPA(USA)</i>
1700 - 1715	Closing Remarks & Adjournment

ACKNOWLEDGEMENTS

We thank our honorary sponsors:



This symposium was supported by NFPA and the Fire Protection Research Foundation



This symposium brief has been prepared by Amanda Kimball, Research Project Manager at the Fire Protection Research Foundation. The information contained herein is based on the input of numerous professionals and subject-matter-experts. While considerable effort has been taken to accurately document this input, the final interpretation of the information contained herein resides with the report author. The content, opinions and conclusions contained in this report are solely those of the authors and do not necessarily represent the views of the Fire Protection Research Foundation, NFPA, Technical Panel or Sponsors. The Foundation makes no guaranty or warranty as to the accuracy or completeness of any information published herein.

About the Fire Protection Research Foundation

The [Fire Protection Research Foundation](#) plans, manages, and communicates research on a broad range of fire safety issues in collaboration with scientists and laboratories around the world. The Foundation is an affiliate of NFPA.



About the National Fire Protection Association (NFPA)

Founded in 1896, NFPA is a global, nonprofit organization devoted to eliminating death, injury, property and economic loss due to fire, electrical and related hazards. The association delivers information and knowledge through more than 300 consensus codes and standards, research, training, education, outreach and advocacy; and by partnering with others who share an interest in furthering the NFPA mission. [All NFPA codes and standards can be viewed online for free.](#) NFPA's [membership](#) totals more than 65,000 individuals around the world.



Keywords: fire protection, emerging issues, emergency responder, economic impact, environmental impact, wood buildings, warehouses, wind turbine, photovoltaic, electrical energy storage system, ESS

Report number: FPRF-2016-19