



# SFPE

*Engineering A Fire Safe World*



# 19th International Water Mist Conference IWMC 2019



## **SFPE: Qualified Engineers for adequate Fire Protection**

**Jose Luis Fernández, SFPE European Director**  
*Berlin, 23 October 2019.*



## SFPE Mission

To define, develop, and advance the use of engineering ***best practices***; expand the scientific and ***technical knowledge*** base; and ***educate*** the global fire safety community to reduce fire risk.

## SFPE Vision

The leaders in engineering a fire safe world.

# Index

## SFPE support to Fire Engineers

### 1. Advocate for the Fire Engineering profession

- Ensure core competencies and key responsibilities are adopted by key stakeholders: RECOMMENDED MINIMUM CORE COMPETENCES
- Collaborate with other organizations: Participation and Alliances

### 2. Serve the education needs across the lifespan of the FPE/FSE professional's career.

### 3. Publications: Recognized guides and standards.

# 1. Advocate for FE in Europe: SFPE Minimum Core Competencies

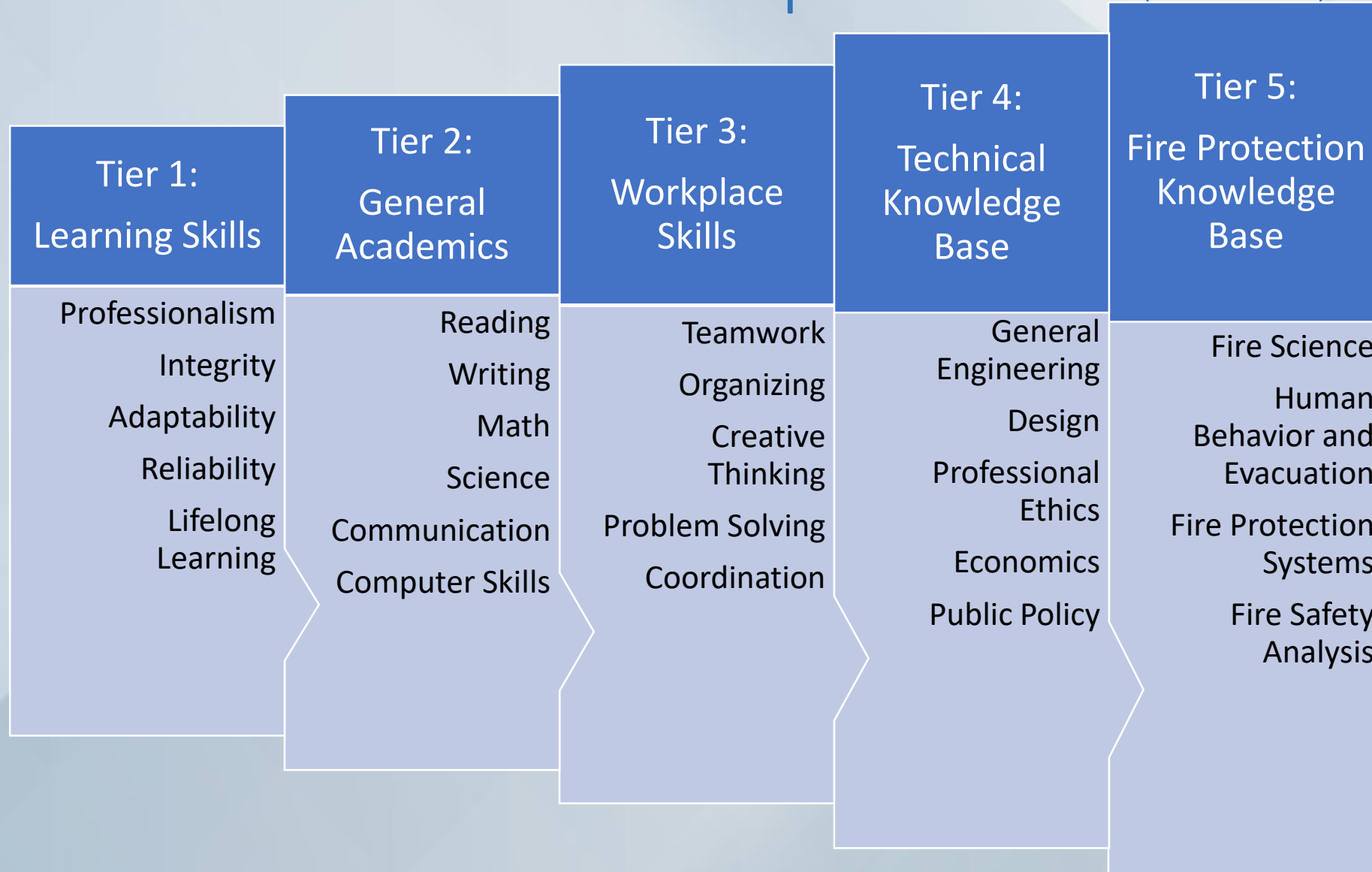
- “A Fire Protection Engineer is an individual who, by formal **training and professional experience**, carries the necessary **competency**, and has the skills to provide guidance and direction to protect life, property and environment from threats posed by fire and its related mechanism.”

# 1. Advocate for FE in Europe: SFPE Minimum Core Competencies

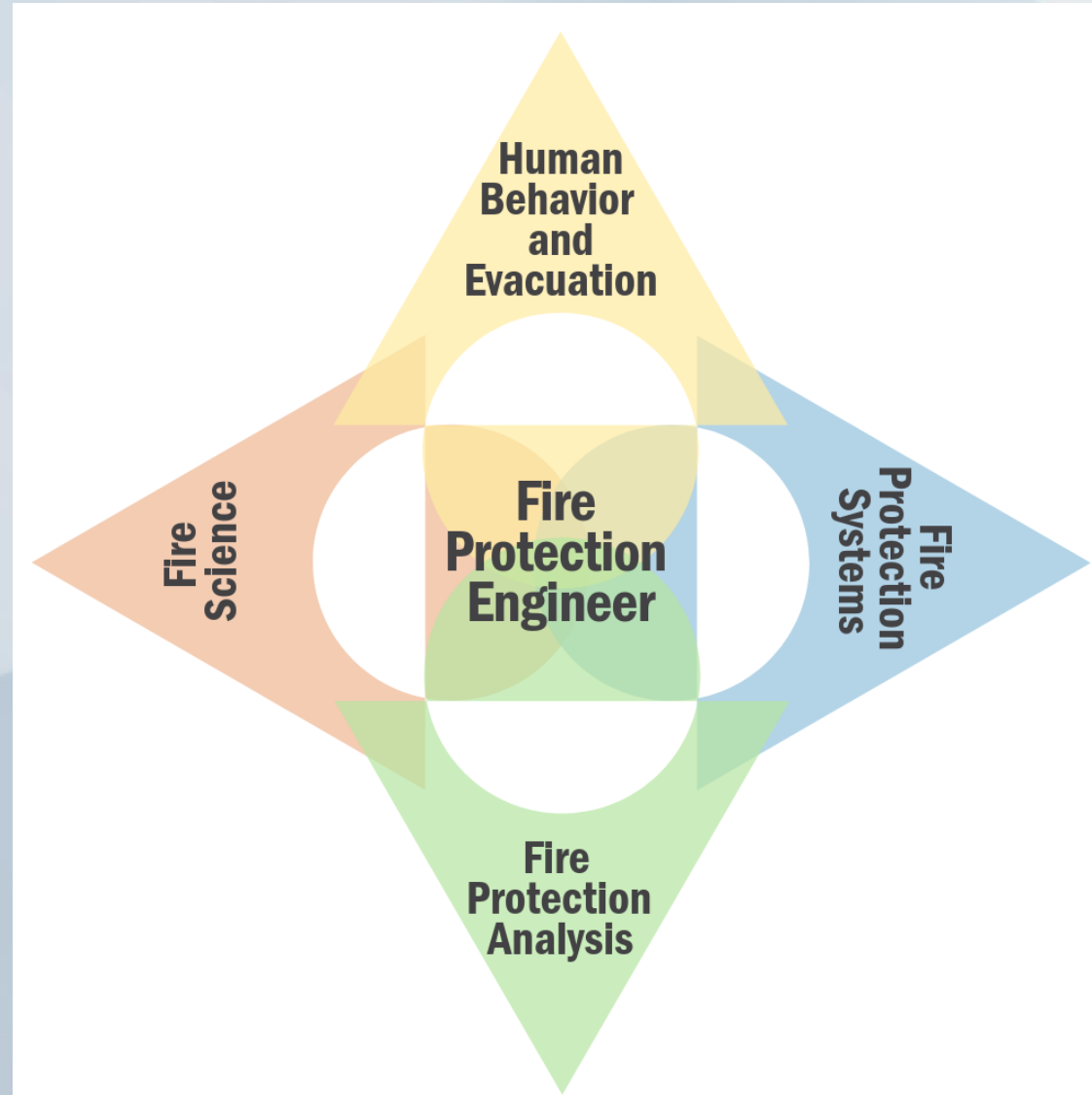
- “...The recommended minimum technical **competencies** are core to the practice of fire protection engineering and are obtained upon the completion of structured education in specific **knowledge and skill** areas, and accompanying applied **experience**.”

[www.sfpe.org/CompetenciesforFPE](http://www.sfpe.org/CompetenciesforFPE)

# SFPE Minimum Core Competencies (continued)

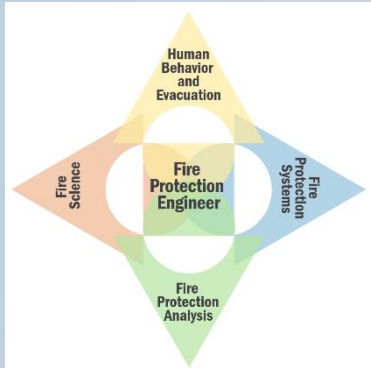


# Fire Protection Knowledge Base



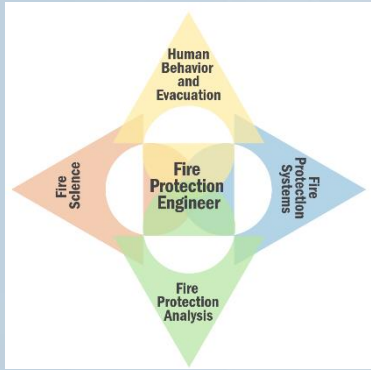


# Fire Protection Knowledge Base



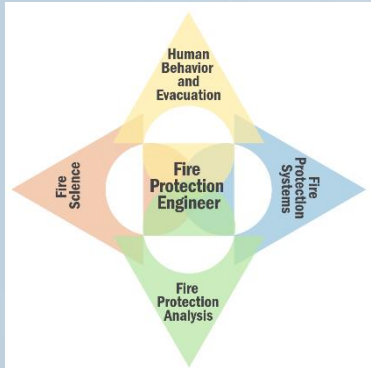
- Fire Science
- Underlying physical principles of fire and its related mechanisms
  - Heat Transfer
  - Fire Chemistry
  - Fire Dynamics

# Fire Protection Knowledge Base



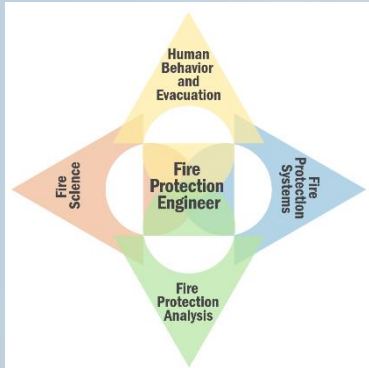
- Human behavior and evacuation
- Human behavior and the principles of means of egress design.
  - Human behavior and physiological response to fire
  - Egress and life safety design

# Fire Protection Knowledge Base



- Fire Protection Systems
- Understanding of fire mitigation and the methods to do so
  - Passive Systems
  - Active Systems
    - Fire Detection and Alarm
    - Fire Suppression

# Fire Protection Knowledge Base



- Fire Protection Analysis
- Principles of technical analysis related to fire protection design
  - Performance-Based Design
  - Smoke Management
  - Evacuation Analysis
  - Structural Fire Protection
  - Risk Management
  - Numerical Methods & Computer Fire Modeling
  - Building and Fire Regulations and Standards



# Advocate: Participation and Alliances

- European Commission + FIEP
- Collaboration with Universities.
- Collaboration with other associations



- Alliance with other organizations



# 3. Continuing Education

- Must remain current with information and technology for fire protection engineering.
- Can be done through study and courses
  - Relevant training and research to keep skills sharp
  - Subjects need review in order to remain competent over the lifespan of a career

# SFPE Educational Programs

- Webinars
- Seminars
- Conferences
  - **ROMA, ITALY – May 2020 – Engineering Solutions for Cultural and Heritage Sites**
  - Auckland, New Zealand- March 2020 – PBD Conference.
  - Georgia, Atlanta - October 2020 – Annual Conference.
  - Berlin, Germany - 2021 - 4th European Conference.
  - Paris, France - 2022 - International PBD Conference.

# Educational Programs - Webinars

Presenter	Webinar	Date
<b>María Fernández-vigil Iglesias</b>	Fire Safety in dwellings occupied by elderly people. The Spanish case	9 September 2019
<b>Lars Bostrom</b>	Facade Fires - Recent Developments in Europe	16 September 2019
<b>Matteo Pugnalin</b>	“Intelligent Egress in a Historical Building	7 octobe 2019
<b>Felipe Herrera</b>	Structural Performance and Particularities of Multi-Story Intermodal Steel Container Structures at Elevated Temperatures	21 October 2019
<b>Maria Lappano</b>	Crowd Management and Control - Case Study For a Stadium Using Pedestrian Dynamics® Software	11 November 2019
<b>Karl Wallasch</b>	Design and Future Trends of High-Rise Residential Towers – A Comparison between UK and German Regulations	25 November 2019
<b>Robert Jonsson</b>	PERFORMANCE BASED DESIGN OF FIRE SAFETY IN HIGH-RISE TIMBER BUILDINGS	9 December 2019

<https://www.sfpe.org/page/SFPEWebinarSeries>



## 4. SFPE - Trusted Resource

- Research Roadmap
- Emerging Trends and Technology Advances
- Standards Development & Technical Documentation

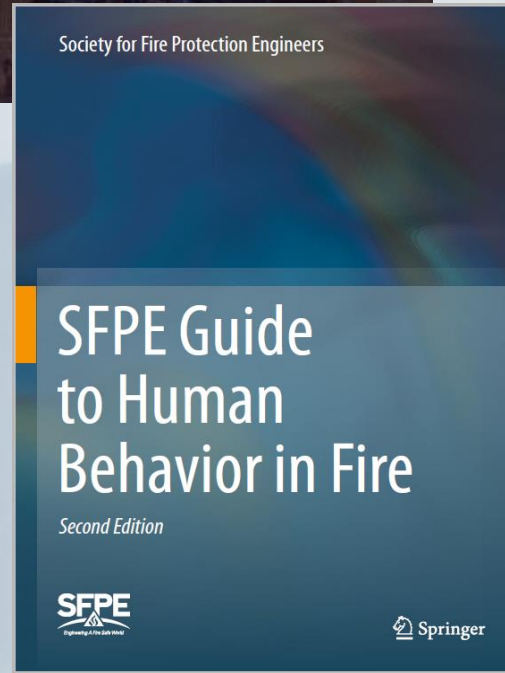
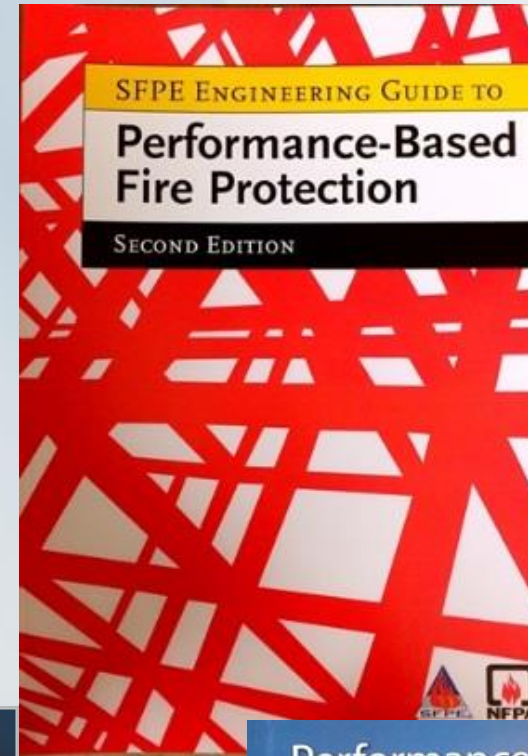
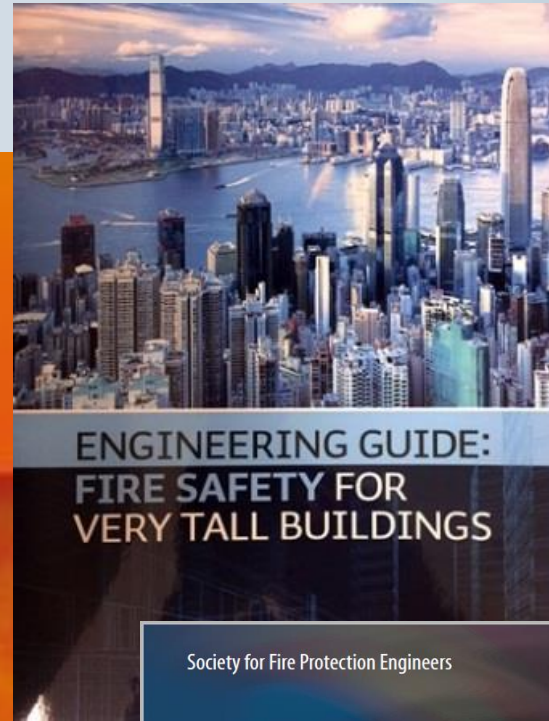
# Promote & Implement the Research Roadmap

<b>Research Needs for the Fire Safety Engineering Profession</b>		<b>TOOL, APPLICATIONS, &amp; METHODS</b>			
		<b>Data</b>	<b>Innovative Technology /Materials</b>	<b>Design Tools</b>	<b>Risk /Probabilistic Approaches</b>
<b>THREADS</b>	<b>Human Behavior</b>	✓	✓	✓	✓
	<b>Building Fires</b>	✓	✓	✓	✓
	<b>Resilience/Sustainability</b>	✓	✓	✓	✓
	<b>Fire Service</b>	✓	✓	✓	✓
	<b>Fire Dynamics</b>	✓	✓	✓	✓
	<b>Fire Safety Systems</b>	✓	✓	✓	✓
	<b>Forensics/Investigations</b>	✓	✓	✓	✓
	<b>Wildland/WUI Fires</b>	✓	✓	✓	✓
	<b>Non-Building Fires</b>	✓	✓	✓	✓

# Emerging Hazards, Products & Technologies Impacting Our Profession

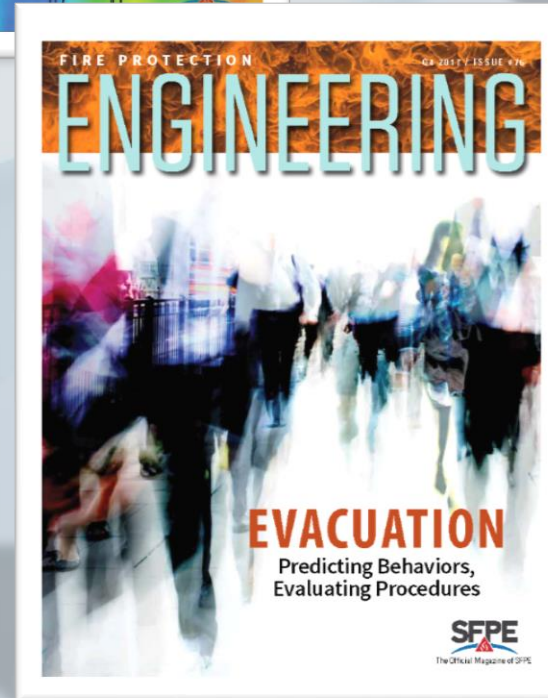
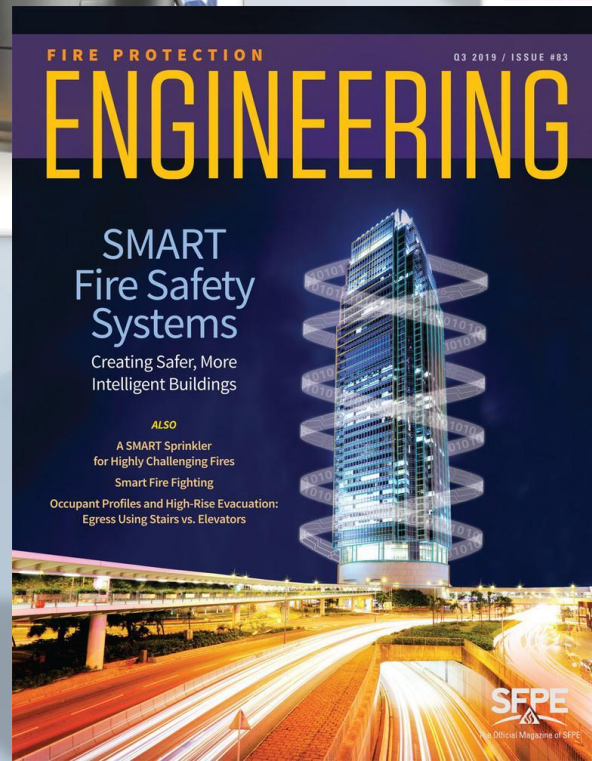
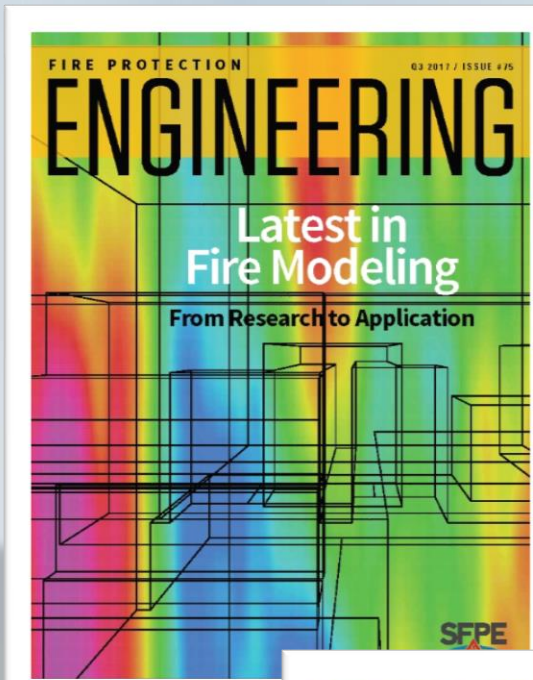
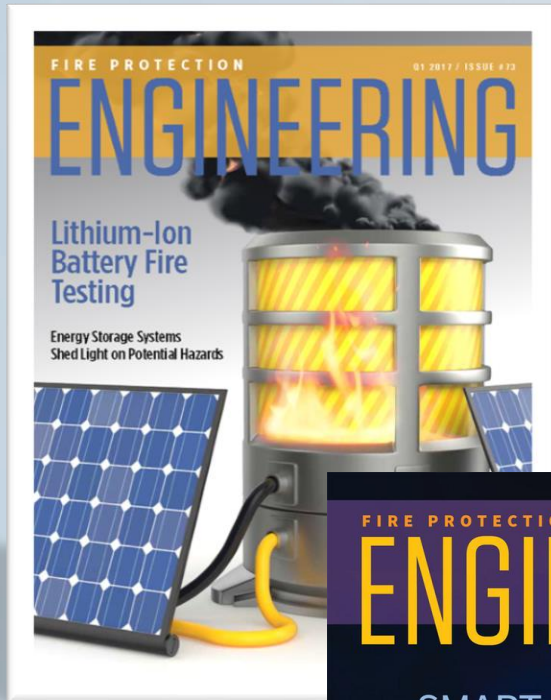
- Building Materials (i.e. new construction materials, lightweight construction, external cladding systems, & tall timber buildings)
- Energy Storage
- Wildland Urban Interface Fires
- Alternate Detection
- Advances in Suppression System Technology (i.e. SMART Sprinklers, Storage commodities, automated storage and oxygen reduction systems)
- Computer Models
- BIM/BIS

# Guides/Handbooks





# FPE Magazine



# E-News

**FPE eXTRA SFPE**  
DEL EDITOR DE FIRE PROTECTION ENGINEERING MAGAZINE

**FPE eXTRA SFPE**  
FROM THE PUBLISHER OF FIRE PROTECTION ENGINEERING MAGAZINE

**SFPE EUROPE**  
Q1 2015 | ISSUE NO. 1 AN OFFICIAL PUBLICATION OF SFPE

**SFP@UPDATE SFPE**  
A MONTHLY UPDATE ON THE LATEST SFPE NEWS AND RESOURCES



THANK YOU VERY MUCH  
BAЯPAA  
PIAA  
CIA  
GRAZIE  
SUJW  
MHOBO BИBЛA  
PAA  
BLA  
GR  
MULTUMESC  
THANK YOU VERY MUCH  
QUYANAQ  
SAAGHA XALDA HWA  
MHTO  
KHUBLEI  
MHOBO BИBЛA  
BACAPИ  
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MOCHCHAKKERAM  
MATUR NUW

# THANK YOU

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NK YOU VERY MUCH  
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KOMO  
XMET



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