



2026 WUI Fire Engineering Summit

August 10-12, 2026
College Park, Maryland, USA



DEPARTMENT OF
FIRE PROTECTION
ENGINEERING



Research Institutes | Fire Safety

SFPE FOUNDATION

Grand Challenges Initiative

Monday, August 10	
PRE-CONFERENCE	
10:00 am – 6:00 pm	Registration Opens; Expo Halls open for Exhibitor and Poster Set Up (Atrium and Prince George's)
10:00 am – 6:00 pm	Speaker Ready Room Open (Nanticoke)
TBD	<p>Tour of campus labs; only open to WUI Summit registrants; no cost to attend.</p> <p>The tour group will meet inside of the front entrance of the Stamp Student Union next to the Testudo statue. From there, we will depart on a walking tour around various campus engineering spaces and laboratories.</p> <p>Tour details will be updated as they become available.</p>
6:00 – 8:00 pm	<p>Opening Reception (Grand Ballroom)</p> <p>Expo and Poster rooms open (Atrium and Prince George's)</p>
Tuesday, August 11	
2026 WUI FIRE ENGINEERING SUMMIT	
DAY 1: Understanding the WUI Fire Problem in Context and Current Engineering Approaches	
8:00 – 8:30 am	Breakfast (Grand Ballroom)
8:30 – 8:45 am	<p>Welcome & Opening Remarks</p> <p><i>Leslie Marshall, PhD, SFPE Foundation</i></p> <p><i>Arnaud Trouvé, PhD, University of Maryland, College Park</i></p> <p><i>Steve Kerber, PhD, UL Fire Safety Research Institute</i></p>

Part 0: Setting the Scene	
8:45 – 9:15 am	<p>Opening Keynote - What is the WUI fire problem? <i>Steve Kerber, PhD, UL Fire Safety Research Institute</i> WUI fires in historical perspective, through the lens of forensic analysis and post-incident fire investigation, understanding why WUI fires present a unique and ill-defined challenge.</p>
9:15 – 10:15 am	<p>Panel #1 - Understanding the Impact of WUI Fires. This panel will focus on the varied and wide-ranging costs of WUI fires, helping to highlight the breadth and interdisciplinary nature of the WUI fire problem from an engineering perspective. Panelists will include experts on the health impacts of WUI fires (including smoke-related impacts), environmental impacts (e.g., water supplies/systems, soil contamination), social impacts (e.g., dislocation, housing and human services, vulnerable populations), and economic impacts. This discussion will set the stage for why we need to build an interdisciplinary, global WUI fire engineering research community informed by practitioners and partners in other fields to tackle these complex phenomena.</p> <ul style="list-style-type: none"> • <i>Erica Fischer, PhD, Oregon State University</i> • <i>Kimiko Barrett, PhD, Alliance for Wildfire Resilience</i> • <i>Christine Wiedinmyer, PhD, University of Colorado, Boulder and University Corporation for Atmospheric Research (UCAR)</i> • <i>Moderator: Fernando Raffan-Montoya, PhD, University of Maryland, College Park</i>
10:15 – 10:45 am	<p>Networking Break and Research Posters in Expo Halls (Atrium and Prince George's) Light refreshments served</p>
Part 1: Individual Asset-Level Risk Assessment, Exposure Characterization, Guides and Standards	
10:45 – 11:05 am	<p>A Test-Based Approach to Assessment of WUI Fire Hardening on Walls and Soffits <i>Jason Smart, PE, MSCE, American Wood Council</i></p>
11:05 – 11:25 am	<p>Window Failure During Exterior Fire Exposure <i>Joseph Willi, UL Fire Safety Research Institute</i></p>
11:25 – 11:45 am	<p>Mitigating Wildfire Risk to Structures: Best Practices from FM Data Sheet 9-19 <i>William Skene, PE, FM</i></p>
11:45 am – 12:00 pm	<p>Audience Questions & Discussion with Part 1 Speakers</p>

12:00 – 12:30 pm	Student Pitch Competition Presentations <i>3 Student Teams, To Be Announced</i> Moderators: <i>Babak Bahrani, PhD, Eastern Kentucky University, and Hamed Salehi, PE, Holmes</i>
12:30 – 1:30 pm	Lunch Sponsor Demonstration (Available) 1:00 – 1:30
Part 2: Community-Level Risk Assessment, Exposure Characterization, Guides and Standards	
1:30-2:00 pm	Keynote #2 - Insurance Approaches to WUI Risk Assessment and Modeling: Research Gaps and Opportunities for Engineers <i>Pete Abbate, FCAS, MAAA, Milliman</i>
2:00 – 2:45 pm	Panel #2 - How Can Engineers Help Drive Better Decision-Making in WUI Communities? <ul style="list-style-type: none"> • <i>Donna Settle, PE, PMSFPE, Gallagher</i> • <i>Ali Ashrafi, PhD, PE, CFEI, Thornton Tomasetti</i> • <i>Birgitte Messerschmidt, PSFPE, National Fire Protection Association (NFPA)</i> • <i>Nathan Wittasek, PE, Simpson Gumpertz & Heger (SGH)</i> • <i>Moderator: Ann Jeffers, PhD, University of Michigan</i>
2:45 – 3:05 pm	Fire Risk Assessment of WUI Communities Based on Internal Settlement Characteristics <i>Haseeb Kazmi, MsC, Universitat Politècnica de Catalunya Center for Technological Risk Studies (CERTEC)</i>
3:05 – 3:25 pm	Wildfire Loss Prevention in the WUI - A Commercial / Industrial Insurance Perspective <i>Andrew Foote, AXA XL Risk Engineering</i>
3:25 – 3:45 pm	Wildfire Exposure of Community Infrastructure: A Scenario Analysis for Ashland, Oregon <i>Rachel Fields, Thornton Tomasetti</i>
3:45 – 4:00 pm	Audience Questions & Discussion with Part 2 Speakers
4:00 – 4:30 pm	Networking Break and Research Posters in Expo Halls (Atrium and Prince George's)
Part 3: Notification, Evacuation, and Human Behavior in WUI Fires	
4:30 – 5:15 pm	Keynote #3 - Why WUI Fire Engineering Needs Social Scientists <i>Jeannette Sutton, PhD, The Warn Room</i>
5:15 – 5:35 pm	A Fire Engineering and Advanced Geospatial Analytics Approach to Wildfire Evacuation Planning <i>Darlene Rini, PE, Jensen Hughes</i>
5:35 – 5:55 pm	Evacuation Contingencies and Life Safety in WUI Fires <i>Eric Link, PhD, National Institute of Standards and Technology</i>
5:55 – 6:15 pm	Contributing to WUI Community Fire Preparedness: Interdisciplinary Activities of the FIREPRIME Project <i>Pascale Vacca, PhD, Universitat Politècnica de Catalunya Center for Technological Risk Studies (CERTEC)</i>

6:15 – 6:30 pm	Audience Questions & Discussion with Part 3 Speakers
6:30 – 8:00 pm	Evening Reception (Grand Ballroom) Expo and Poster rooms open (Atrium and Prince George’s)
Wednesday, August 12	
2026 WUI FIRE ENGINEERING SUMMIT	
DAY 2: Innovation, Expansion, and Building a Global WUI Fire Engineering Applied Research Community	
8:00 – 8:30 am	Breakfast (Grand Ballroom)
8:30 – 8:45 am	Welcome & Day 1 Recap <i>Leslie Marshall, PhD, SFPE Foundation</i>
Part 4: What's Next? Examples of Engineering-Based Research and Technology in Practice	
8:45 – 9:30 am	Keynote #4 - How Is New Technology Making a Difference? This keynote will provide a survey of new technologies currently being applied to understand and respond to the WUI fire problem, as well as what the future holds and opportunities for engineers to contribute. <i>Speaker Invited</i>
Part 5: The Digital Technology Frontier Applied to WUI Fires	
9:30 – 9:50 am	Near-Real-Time Monitoring of WUI Fires Using Super-Resolved GOES Imagery <i>Ryota Yagi, MEng, University of Nevada, Reno</i>
9:50 – 10:10 am	Benchmarking Current Capabilities and Gaps in Wildfire Risk Modeling Science and Technology: Findings from the Wildfire Risk Modeling Exercise <i>Rebecca Harned, UL Fire Safety Research Institute</i>
10:10 – 10:20 am	Audience Questions & Discussion with Part 5 Speakers
10:20 – 11:20 am	Dedicated Poster Session & Networking Break (Atrium and Prince George’s) Attendee voting on “Best Poster” Award
Part 6: WUI Fire Modeling—Where Research Meets Practice	
11:20 – 11:40 am	Simulations of WUI/Urban Conflagrations with the Landscape-Scale Fire Spread Simulator Called ELMFIRE <i>Arnaud Trouvé, PhD, University of Maryland, College Park</i> <i>Chris Lautenberger, PhD, PE, CloudFire</i>
11:40am – 12:00 pm	Multi-level Framework to Model Wildfires at the Wildland-Urban Interface: Case Study <i>Tanmay Vora, PhD Candidate, University of Michigan</i>
12:00 – 12:10 pm	Audience Questions & Discussion with Part 6 Speakers

12:10 – 12:15 pm	<p>Student Pitch Competition Awards Announced <i>3 Student Teams, To Be Announced</i> Moderators: <i>Babak Bahrani PhD, Eastern Kentucky University, and Hamed Salehi, PE, Holmes</i></p>
12:15 – 1:15 pm	<p>Lunch Sponsor Demonstration (Available) 12:45 – 1:15</p>
Part 7: Building an Interdisciplinary WUI Fire Engineering Community	
1:15 – 2:00 pm	<p>Panel #3 - WUI Education for Engineers. This panel discussion will focus on challenges and opportunities in higher education and beyond. The panelists will feature academics and industry representatives from different engineering fields and discuss what it means to be a WUI fire engineer, what you need to know, and how we can create and grow the needed WUI fire expertise across disciplines.</p> <ul style="list-style-type: none"> • <i>Albert Simeoni, PhD, Worcester Polytechnic Institute</i> • <i>Serdar Selamet, PhD, Exponent & Stanford University</i> • <i>Fernando Raffan-Montoya, PhD, University of Maryland, College Park</i> • <i>Elsa Pastor, PhD, Universitat Politècnica de Catalunya Center for Technological Risk Studies (CERTEC)</i> • <i>Qianru Guo, PhD, PE, Simpson Gumpertz & Heger (SGH)</i> • <i>Moderator: Daniel Gorham, PE, UL Fire Safety Research Institute</i>
2:00 – 2:30 pm	<p>Panel #4 - WUI Working Group Module Updates. During this session, representatives from the SFPE Foundation WUI Working Group Modules will each present an update on work completed to date, ongoing projects, and forthcoming opportunities to engage across all three module topic areas: WUI Research, WUI Education, and WUI Policy.</p> <ul style="list-style-type: none"> • <i>James Urban, PhD, Worcester Polytechnic Institute</i> • <i>William Koffel, PE, Koffel Associates & University of Maryland, College Park</i> • <i>Erica Fischer, PhD, Oregon State University</i>
WUI Workshop: Driving the Future of WUI Fire Engineering Research & Practice	
2:30 – 2:45 pm	<p>Workshop Goals <i>Leslie Marshall, PhD, Director, SFPE Foundation</i></p>
2:45 – 3:30 pm	<p>Workshopping Research & Educational Priorities – Breakout groups</p> <p>Group 1: WUI Education & Outreach (Atrium) <i>Beth Weckman – Facilitator</i></p> <p>Group 2: WUI Education & Outreach (Prince George’s) <i>Babak Bahrani – Facilitator</i></p> <p>Group 3: WUI Research (Grand Ballroom) <i>Dan Gorham – Facilitator</i></p>

	<p>Group 4: WUI Research (Grand Ballroom) <i>Amanda Kimball – Facilitator</i></p> <p>Groups 5 & 6: TBD if needed</p>
3:30 – 4:00 pm	Networking Break and Research Posters in Expo Halls (Atrium and Prince George's)
4:00 – 4:30 pm	<p>Breakout Group Reports & Prioritization Exercise <i>Leslie Marshall, PhD, SFPE Foundation & facilitators from each breakout group</i></p>
4:30 – 5:00 pm	<p>Closing Panel #6 - Creating the Infrastructure for WUI Fire Engineering Research and Collaboration. This short panel discussion will engage attendees in articulating lingering thoughts and questions from two days of presentations and discussion, as well as cover next steps.</p> <ul style="list-style-type: none"> • <i>Steve Kerber, PhD, UL Fire Safety and Research Institute</i> • <i>Leslie Marshall, PhD, SFPE Foundation</i> • <i>Arnaud Trouvé, PhD, University of Maryland, College Park</i>