



**National Research Council Postdoctoral Associate Positions
Fire Research Division, Building and Fire Research Laboratory (BFRL)
National Institute of Standards and Technology (NIST)**

Become a part of one of the top fire laboratories in the world with the potential to build a research career and have a real and measurable effect on life safety and property preservation. The Fire Research Division at NIST has postdoctoral positions available for Ph.D. engineers, mathematicians, and physical scientists in a dynamic and growing research environment. Proposals are solicited on the following topics:

Fire Metrology

- Velocity, Radiation, Heat Release Rate and Species Measurement in Large Fires
- Measurement of Soot and Smoke Properties

Combustion Fundamentals

- Ignition, Pyrolysis, Extinction, Flame Structure, Flame Speed, and Flame Stabilization
- Droplet Dynamics and Droplet Surface Interactions

Fire Simulations

- Fire Dynamics Using Large Eddy Simulation/Direct Numerical Simulation Techniques
- Modeling and Visualizing Fire Dynamics
- Predicting the Response of Structures to Fire

Flammability and Material Behavior in Fire

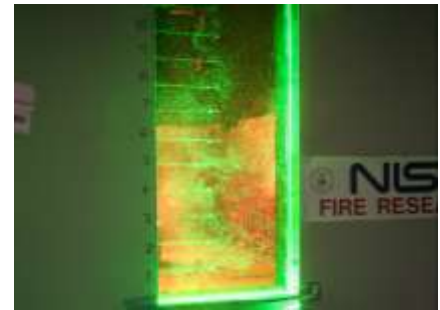
- Modeling of Materials that Melt and Flow in Fire
- Polymer Structure and Flammability Properties
- Reaction Rate Theories for Large Molecules in Condensed Phases
- Polymer Nanocomposite Flammability and High-throughput Methods Development
- Combustion-Synthesized Nanostructures

Fires at the Wildland-urban interface

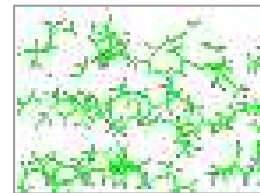
- Simulation of Fire Spread and Smoke Movement in the Wildland-urban Interface
- Firebrand Generation and the Ignition of Fuel Beds by Firebrands



WUI fire simulation



Stereo-PIV measurement of fire-induced doorway flow



Molecular-Dynamics model of decomposing polymer



Mattress flammability test

Applications are accepted biannually, February 1 and August 1. U.S. citizenship is required. Refer to the NRC website[‡] for more information on the application process and contact information for the research advisors. Detailed descriptions of the research opportunities can be found at <http://www.bfrl.nist.gov> or by sending an email to wanda.duffin-ricks@nist.gov.

[‡] <http://nrc58.nas.edu/pgasurvey/data/aobooks/rapbooks.asp?mode=fntmtr&progctr=50&seq=20>