



**National Institute of  
Standards and Technology**  
U.S. Department of Commerce

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[http://www.nist.gov/el/fire\\_grants.cfm](http://www.nist.gov/el/fire_grants.cfm)

## Extramural Fire Research Grants and Cooperative Agreements Awarded 2005-2012

### **NEW AWARDS MADE DURING FISCAL YEAR 2012**

<b>Institution</b>	<b>PI</b>	<b>Title</b>	<b>Total Award</b>
University of Dayton	A. Morgan	Flame Retardant Technology Discovery and Flammability Method Development	\$110K
Fire Protection Research Foundation	K. Almand	Development of Standard Cooking Fire Scenarios and Candidate Test Methods for Evaluating Cooking Fire Mitigation Technologies	\$88K
International Code Council	D. Bailey	Wildfire Safe, Sound & Code Smart	\$88K
University of Maryland	P. Sunderland	The Role of Particle Formation in Gas-Phase Fire Retardants for Polymers	\$115K
San Diego State University Research Foundation	F. Miller	Measurements and Modeling of Wind Effects on Wildland Urban Interface Fires	\$129K

**NEW AWARDS MADE DURING FISCAL YEAR 2011**

<b>Institution</b>	<b>PI</b>	<b>Title</b>	<b>Total Award</b>
Fire Protection Research Foundation	C. Grant	Performance Requirements for Compatible and Interoperable Electronic Equipment for Emergency Fire Responders	\$62K
Texas Engineering Experiment Station	J. Grunlan	Flame Retardant and Damage-Resistant Nanocoatings for Fabric, Fibers and Fill from Environmentally Benign Materials	\$461K
San Jose State University	C. Clements	Field Experiments of Fire-atmospheric Interactions during Head Fires on Slopes	\$299K
Hughes Associates	J. Floyd	Evolutionary Development of Advanced Species Tracking and Combustion Modeling for Fire Dynamics Simulator	\$300K
McNamara Consulting, Inc.	D. McNamara	Coupling Wildland-Urban Interface Fire Models to a Geographic Information System	\$277K
American University	D. Fox	Lignocellulosic Materials as Intumescent Flame Retardants for Bio-based Polymer Composites	\$410K

**NEW AWARDS MADE DURING FISCAL YEAR 2010**

<b>Institution</b>	<b>PI</b>	<b>Title</b>	<b>Total Award</b>
Marquette University	C. Wilkie	New Nano-Dimensional Materials for Fire Retardancy	\$291K
University of Utah	S. Krueger	Multi-Scale Modeling of Wind & Wildfires	\$264K
Fire Prot. Research Fdnt.	K. Almand	Mitigating Fire Losses from Home Cooking Fires	\$74K
University of Maryland	S. Stoliarov	A Multiscale Approach to Parameterization of Burning Models for Charring Polymers	\$308K
Worcester Polytechnic Inst.	B. Meacham	Quantification of Fire Risk, Performance Levels, Design Fires and Acceptance Criteria for Use in Performance-Based Codes and Fire Safety Design	\$342K

**NEW AWARDS MADE DURING FISCAL YEAR 2009**

<b>Institution</b>	<b>PI</b>	<b>Title</b>	<b>Total Award</b>
University of Dayton	A. Morgan	Research and Development on New Flame Retardant Chemistries for Polyurethanes	\$300K
University of Maryland	T. Kashiwagi	Reducing Flammability of Polymers by Enhancing Char Formation	\$74K
Harvey Mudd College	Z. Duron	Development of a Wireless Fire-Sensor Technology for Monitoring Stability Loss in Burning Buildings	\$150K
University of Maryland	J. Milke	Analysis of Observation of People Movement Characteristics During Evacuation of High-Rise Office Buildings	\$275K

**NEW AWARDS MADE DURING FISCAL YEAR 2008**

<b>Institution</b>	<b>PI</b>	<b>Title</b>	<b>Total Award</b>
National Fallen Firefighters Foundation	J. Whitestone	Firefighter Life Safety – Fire Research	\$100K
Worcester Polytechnic Institute	N. Dembsey	Development of Guidelines for Obtaining Material Parameters for Input into Fire Models	\$600K
Texas Engineering Exp.	J. Grunlan	Layer-by-Layer Assembly of Flame Retardant Coatings for Foam and Fabric	\$\$253
Hughes Associates, Inc.	J. Floyd	Multi-parameter Mixture Fraction with Multi-Step Combustion for Soot Formation and Destruction for Fire Dynamics Simulator	\$300K
Coeur d’Alene Tribe	F. Roberts	WFDS GIS Integration	\$318K
American University	D. Fox	Reduced Polymer Flammability Using POSS-Modified Cellulose	\$272K

**NEW AWARDS MADE DURING FISCAL YEAR 2007**

<b>Institution</b>	<b>PI</b>	<b>Title</b>	<b>Total Award</b>
University of MD	A. Trouve	Modeling of Backdraft Phenomena in the Fire Dynamics Simulator	\$ 67K

Tennessee Technology Institute	H. Stretz	Determination of Montmorillonite Nanocomposite Aggregation Rates Using Real Time X-Ray Diffraction Techniques at High Temperatures	\$ 67K
Hughes Associates, Inc.	S. Gwynne	Development of a Facility Enabling the Collection, Dissemination and Application of Data Relating To Human Behavior in Fire	\$193K
University of MD	F. Mowrer	Effects of Thermal Environment on the Performance Of Thermal Imaging Cameras	\$ 60K
University of Texas	O. Ezekoye	Positive Pressure Ventilation Induced Transport of Fire Products in a Residential Structure	\$313K
Michigan State University	V. Kodur	Collaborative Research to Develop Guidelines for Fire Safety Design of Steel Beam-Columns	\$124K
Princeton University	M. Garlock	Collaborative Research to Develop Guidelines for Fire Safety Design of Steel Beam-Columns	\$ 84K
Michigan State University	V. Kodur	NSF Workshop on Structures and Fire: Research Needs and State-of-the-Art	\$ 16K
RGR Consulting	R. Rehm	Landscape Model for WUI Fire Spread	\$196K
University of Utah	S. Krueger	Multi-Scale Modeling of Wildfires	\$289K
Case Western Reserve	C. Sung	Ignition Propensity of Hydrogen in the Presence of Metal Surfaces	\$300K
Fire Cause Analysis	J. Zicherman	Southern California Urban/Wildland Interface Fires Dataset (SCUWI): Scoping and Resolution Study	\$ 25K

**NEW AWARDS MADE DURING FISCAL YEAR 2006**

<b>Institution</b>	<b>PI</b>	<b>Title</b>	<b>Total Award</b>
Harvey Mudd College	Z. Duron	Real-Time Monitoring of Burning Structures	\$287K
Univ. of Texas @ San Antonio	J. Clark	The Integration of Biometric Technologies with Fire Fighting Information Systems	\$95K
Georgia Tech Res. Corp.	S. Kumar	Carbon Nanotube Based Fibers and Fabrics for Thermal Protection	\$300K
Marquette Univ.	J. Hossenlopp	New Directions in Nanocomposite-Based Fire Retardant Additives for Polymers	\$150K
Purdue Univ.	A. Varma	Realistic Fire Behavior and Stability of Steel Building Structures	\$149K
Univ. of Massachusetts Amherst	E. Coughlin	Fire Safe Polymers and Polymer Composites	\$286K

**NEW AWARDS MADE DURING FISCAL YEAR 2005**

<b>Institution</b>	<b>PI</b>	<b>Title</b>	<b>Total Award</b>
Univ. of North Texas	N. D'Souza	Layer Double Hydroxides for Flame Retardant Nanocomposites	\$71K
Res. Fdnt. of CUNY	N. Groner	Transfer of Cognitive Engineering Theory and Practice to Building Protection Systems Design	\$35K
Univ. of Maryland	T. Kashiwagi	Flame Retardant Mechanism of the Nanotubes-Based Nanocomposites	\$105K
Society of Fire Protection Engineers	M. Hurley	Analysis of FDS Thermal Detector Response Predictive Capability	\$23K
Univ. of Florida	A. Long	Fire Spread and Structural Ignitions from Horticultural Plantings in the Wildland-Urban Interface	\$239K
Coeur d'Alene Tribe	J. Arnold	Enhancing the Fire Dynamics Simulator for Modeling Fire Behavior in the Wildland-Urban Interface	\$233K
Hughes Associates	J. Floyd	Multi-Parameter, Multiple Fuel Mixture Fraction Combustion Model for the Fire Dynamics Simulator	\$288K
Univ. of Maryland	P. Sunderland	Fire Safety Risks Associated with Leaks in Hydrogen Systems	\$327K