



HOTLINE

FIRE PROTECTION ENGINEERING

A NEWSLETTER
FOR ALUMNI AND
FRIENDS OF THE
DEPARTMENT OF
FIRE PROTECTION
ENGINEERING

INSIDE

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Jim Milke Named Department Chair



Jim Milke has been named chair of the Department of Fire Protection Engineering (FPE). He succeeds Marino di Marzo, who served as chair for 10 years and continues to serve as a professor in the department.

A professional engineer, Milke received his B.S. in

fire protection engineering, his M.S. in mechanical engineering, and his Ph.D. in aerospace engineering from the University of Maryland. He has been affiliated with the department for more than 30 years, beginning in 1977 as a research assistant and subsequently serving as a lecturer, assistant professor and associate professor. He has served as associate department chair for the last decade and directed the FPE distance education program for the last two years.

Milke has received numerous honors from the university and the profession. He won the John L. Bryan Mentor Award from the Society of Fire Protection Engineers (SFPE) in 2007 and was the first recipient of the Director's Award from SFPE in 1988. He has co-authored two books on fire protection engineering and has written numerous book chapters, articles and reviews.

A regular presenter at professional conferences, Milke is a member of the Standards Council of the National Fire Protection Association, for which he has served on numerous technical committees. He is the president of the SFPE and is a charter member of the Structural Engineering Institute of the American Society of Civil Engineers and the Fire Council of Underwriters Laboratories. He was part of the FEMA-

sponsored team that investigated the World Trade Center attacks and has also been consulted by numerous national and state committees on fire safety.

Milke Highlights Department Strengths and Charts Future Goals

When FPE Department Chair Jim Milke joined the university, the department consisted of "three full-time faculty members and one or two part-time faculty members," he recalls. "We only offered an undergraduate degree and were undertaking a modest level of research." Today, the department is home to six full-time and a host of part-time faculty members, offers undergraduate and graduate programs on campus and online, and continues to increase its level of research activity. Milke recently talked about how the department has evolved and the future direction of what he calls "one of the leading entities in the fire safety field."

Q. How would you describe your transition to chairman of the department?

A. "When my chairmanship was announced, the broad-ranging support through email, letters and words of encouragement from faculty, staff, alumni, and colleagues at other institutions and in the industry was overwhelming. The support of Clark School Dean Darryll Pines has been tremendous. The other engineering chairs have provided a warm welcome, and I appreciate inclusion in this elite group as I begin to more fully understand the rules of engagement and the financial aspect of managing a department."

Q. What are the greatest strengths of the department?

A. "The collegiality in our small department. What brought me here was the opportunity to work with students in the program. I enjoy the teaching

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Jim Milke Named Department Chair

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environment and the interaction among faculty members. The collegiality has made it very enjoyable to work here over the years with such a good group of people.

A highly talented faculty pool. Our faculty members are truly extraordinary individuals with extraordinary capabilities. They are critical in terms of how we leverage this talent to move the department forward.

A wonderful sense of tradition. Our strong tradition is a key motivator for the growth of our alumni network. We cover a wide range of topics, and our graduates represent a variety of expertise.”

Q. What are your short-term goals?

A. “Work more closely with alumni. We want to structure a more formal relationship between alumni and the department to enable closer alumni contact and preserve the tradition that has served the department so well. We are eager to solidify our links with alumni in all the ways they help us. We have the energetic support of a core group of alumni, and we look to enlarge that group.

Build collaboration. We will continue to enlarge our collaborations. To strengthen our research, we must reach beyond the department boundary to other departments in the Clark School and to other colleges to involve all colleagues with an interest in the fire safety field.”

Q. What are your long-term objectives for the department?

A. “Expand research activities and offer a doctoral program. We want to establish ourselves as the focal point of the fire safety field and greatly expand our research activities. We are exploring various initiatives with younger faculty that can take us to the next level in the research arena. We have laid the foundation to take the next academic steps to offer a Ph.D. program someday.

Increase external visibility. Talented people are conducting incredible research in the department, and we must do a better job at external communication and outreach to get the deserved recognition.

Prepare for the future. We want to position the department to be ready for future generations. As senior faculty members retire, we want to be sure that younger faculty are prepared to step up.”

Scholarships Attract Top Students

The Department of Fire Protection Engineering has awarded over \$100,000 in scholarships for the 2011-2012 academic year.

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ARTHUR E. COTE SCHOLARSHIP
NATIONAL FIRE PROTECTION ASSOCIATION
Pamela Herald

DONALD W. BELLES, P.E. SCHOLARSHIP
Rychele Jones
Rosalie Wills

EDWARDS SCHOLARSHIP UTC FIRE & SECURITY
Hugo Hall
Kevin Hall
Zachary Jeffrey
Alexa Rucinski
Lauren Schrupf
Joshua Swann
James Wendt

FIRESTOP CONTRACTORS INTERNATIONAL ASSOCIATION SCHOLARSHIP
Derek Alvey
Colleen Frances

FRANK BRANNIGAN MEMORIAL SCHOLARSHIP
Stephen Jordan
Nicholas Sealover

FRANK J. FEE, JR., SCHOLARSHIP
Robert Hanson
Eric Link

HANKINS & ANDERSON SCHOLARSHIP
Adam Boussouf
Andrew Roberts

HONEYWELL LIFE SAFETY SCHOLARSHIP
Christine Pongratz
Angela Wu

JAMES O. GRENDahl MEMORIAL SCHOLARSHIP
Kenneth Hamburger

LADIES AUXILIARY TO THE MARYLAND STATE FIREMEN'S ASSOCIATION SCHOLARSHIP
Kenneth Hamburger

PHILIP L. DECAMARA, JR., SCHOLARSHIP
CENTER FOR LIFE SAFETY EDUCATION,
AMERICAN FIRE SPRINKLER ASSOCIATION
Christopher Harris
Stephen Jordan

RICHARD G. GEWAIN SCHOLARSHIP
HUGHES ASSOCIATES, INC.
James Day
Brendan McCarrick
Benjamin Nguyen

ROBERT M. GAGNON CENTENNIAL SCHOLARSHIP
Christine Pongratz
Rosalie Wills

ROGER R. CHOLIN SCHOLARSHIP
Taylor Myers

SALAMANDER SCHOLARSHIP
Timothy Facemire
Christopher Harris
Lauren Schrupf

SARAH B. BRYAN MEMORIAL SCHOLARSHIP
Carli Hua Xiu Follet
Colleen Frances
Mollie Semmes
Sophia Wu

SFPE CHESAPEAKE CHAPTER SCHOLARSHIP
Stephen Ernst
Kenneth Hamburger
Rychele Jones
Stephany Siegfried

SFPE GREATER ATLANTA CHAPTER SCHOLARSHIP
Anthony Hurst
Christine Pongratz

THE WELLS FUND SCHOLARSHIP
THE COMMUNITY FOUNDATION OF PRINCE GEORGE'S COUNTY, AN AFFILIATE OF THE COMMUNITY FOUNDATION FOR THE NATIONAL CAPITAL REGION
Mercy Eke
Massimo Mazziotti
John Sciandra

Research Funding Continues to Increase

The faculty of the Department of Fire Protection Engineering continues to receive funding from a diverse range of corporations and federal and state agencies. The department's fiscal year 2011 research expenditures exceeded \$1.2 million. Two of six full-time faculty members hold Faculty Early Career Development (CAREER) awards from the National Science Foundation and another faculty member was selected to receive the Presidential Early Career Award for Scientists and Engineers (PECASE).

Photo, *Laminar Chaos*: A laminar soot column oxidized in the presence of a hydrogen flame of a ring burner is disturbed by a passing breeze. Macro photography captures the individual streaks of glowing soot as well as the vivid transition of the dark soot column into the oxidation zone. This research is supported by the National Science Foundation (NSF). P.M. Anderson, H. Guo, J. M. Anderson and P.B. Sunderland.



Sponsor	Name of Project	Principal Investigator
BASF	Analysis of Effectiveness of Gas-Phase-Active Flame Retardant Additives	Stanislav Stolarov
CDC	Detection of Oxygen Leaks from Self-Contained Breathing Apparatus (SCBA)	Peter Sunderland
DHS/FEMA	Assistance to Firefighters Grant: Battery-Free Flashover Alarm for Firefighters	Marino di Marzo
DHS/FEMA	Assistance to Firefighters Grant: Smart Firefighter Garments for Burn Mitigation and Firefighter Safety	Marino di Marzo
DOJ/NIJ	Scale Modeling in Fire Reconstruction	James Quintiere, Andre Marshall
FAA	Development of Flaming Combustion Calorimeter	Stanislav Stolarov
FAA	Material Flammability: Two-dimensional Burning Model for Aircraft Materials	Stanislav Stolarov
FM Global	Analysis and Oxidation of Corrugated Cardboard	Stanislav Stolarov
FM Global	Atomization Modeling for Fire Suppression Injectors	Andre Marshall
FM Global	CFD Modeling of Vertical Turbulent Wall Fires	Arnaud Trouvé
Ford Motor Company	Lithium Ion Battery Thermal Safety	Peter Sunderland, Jim Milke, Stanislav Stolarov
MAA	Airport Applications in Fire Protection Engineering	Jim Milke
MIPS	Logic Advanced Fire Technology	Jim Milke
NASA	CUIP Third-Generation Reusable Launch Vehicle Technology	Andre Marshall
NASA	Experimental Investigation of Emulated Burning Rate at Various Gravity Levels	James Quintiere
NASA	Flame Design: A Novel Approach to Clean Efficient Diffusion Flames	Peter Sunderland
NASA	Graduate Student Researchers Program: Non-intrusive Thermal Characterization of Film Cooled Flows	Andre Marshall
NASA	Smoke Points in Coflow Experiment (SPICE)	Peter Sunderland
NASA	Space Technology Research Fellowship: Experimental Investigation of Emulated Burning Rate at Various Gravity Levels	Peter Sunderland
NEMA	Comparative Loss of Life and Injury Analysis Between: Fully Sprinklered Occupancies, Smoke Detector-Only Occupancies and Sprinklered in Combination with Smoke Detector-Protected Occupancies	Jim Milke
NIST	A Multiscale Approach to Parameterization of Burning Models for Charring Polymers	Stanislav Stolarov
NIST	Analysis of Observations of People Movement	Jim Milke
NSF	ARRA: Collaborative Research - Petascale Computing, Visualization, and Science Discovery of Turbulent Sooting Flames	Arnaud Trouvé
NSF	CAREER Award: Exploring Jet Fragmentation and Atomization for Combustion	Andre Marshall
NSF	CAREER Award: Soot Oxidation in Hydrocarbon-Free Flames	Peter Sunderland
NSF	Flameless Combustion in a Strongly Radiating Environment	Howard Baum
NSF	Symposium: Student Support for the 10th Symposium of the IAFSS	Peter Sunderland, Arnaud Trouvé



FireTEC Continues to Expand

Fire Testing and Evaluation Center (FireTEC) researchers are working on a number of exciting projects from wood crib fire suppression tests to textile flammability analysis. One significant project was completed at the request of the Maryland State Fire Marshal's Office concerning the hazard associated with decorative fire pots used for ambient lighting.

The series of images (above) illustrates the burn hazard when

refueling fire pots. The flame can travel up the pour stream into the container, resulting in explosive burning and igniting a nearby garment.

FireTEC continues to build laboratory infrastructure with new mechanical and electrical services to meet clients' needs. Visit the website at www.fireTEC.umd.edu to learn more about the FireTEC capabilities.



FPE Alumni Serve as Adjunct Faculty

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Adjunct faculty members are bringing their real-world expertise to the classroom, sharing the latest developments in the field with students as they prepare to enter the profession. FPE alumni are now teaching the following courses on campus:

MATTHEW I. CHIBBARO, B.S. '81,
LECTURER, P.E., C.S.P.

ENFP250 Introduction to Life Safety Analysis

ROBERT M. GAGNON, LECTURER, M.S. '95,
P.E., S.E.T., F.S.F.P.E.

ENFP255 Fire Alarm & Special Hazards

MORGAN J. HURLEY, LECTURER, B.S. '90,
M.S.'00, P.E.

ENFP411 Fire Risk Assessment

ERICA D. KULIGOWSKI, LECTURER, PH.D. '11,
SOCIOLOGY, UNIVERSITY OF COLORADO
AND, M.S. '03, B.S. '01

ENFP489G/613 Human Response to Fire

NOAH L. RYDER, M.S. '00, FPE, M.B.A. '04,
LECTURER AND VISITING RESEARCH
ASSOCIATE, M.S., M.B.A., P.E.

ENFP489N/629N Special Topics: Fire and
Explosion - Investigation and Reconstruction

JOSEPH A. SIMONE, B.S. '84, LECTURER, P.E.

ENFP310 Water-based Fire Protection
Systems Design

FPE Hosts 10th IAFSS Symposium

The department hosted the 10th Symposium of the International Association of Fire Safety Science in June 2011. More than 340 participants attended the symposium, representing 25 countries.

Some 225 scientists and engineers from 23 countries provided 560 reviews for 216 papers. The 2011 Emmons Lecture was given by Professor Takeyoshi Tanaka from Kyoto University in Japan. He provided an overview of the fires that resulted from the 8.9-magnitude earthquake and subsequent tsunami that devastated Japan in March 2011. Other plenary speakers included Carlos Fernandez-Pello, University of California at Berkeley, on ignition; Margaret Simonson McNamee, SP Technical Research Institute in Sweden, on sustainability applied to fire safety design; Andre Marshall, Fire Protection Engineering, on sprinkler sprays; Charles Fleischmann, University of Canterbury in New Zealand, on performance-based design; and Domingos Viegas, University of Coimbra in Portugal, on wildfire propagation. All six plenary presentations are available on the symposium website at www.fpe.umd.edu/iafss-june11/. For more information, visit the symposium Facebook page at www.facebook.com/IAFSS.



Top photo: FPE department student volunteers who helped organize the Symposium

Middle photo: Question and answer segment at the end of an oral presentation

Bottom photo: Colleagues engaged in lively discussion

Student Profiles

Discovering the Role of Fire Protection Engineers in Federal Agencies

In high school, **MATT BAKER**, B.S. '11, M.S. '12, always received good grades in physics, calculus, math and science. When Clark School Ambassadors visited Northern High School in Owings, Md. during his senior year and talked excitedly about how engineering can change the world, Baker was intrigued.



"Fire protection engineering sounded really interesting and even though I did not know much about it, I declared it as my major," says Baker. Within weeks of submitting his application, Baker received a phone call from Jim Milke, chair of the FPE department, and the deal was sealed. "He invited me to campus and when I visited, I was certain FPE was for me,"

says Baker. "That personal touch made the difference."

As an undergraduate, Baker was an active member of the student chapter of the Society of Fire Protection Engineers and served as treasurer of the Salamander Fire Protection Engineering Honorary Society Beta Chapter. To round out his strong academic performance, Baker served an internship at the Office of Compliance in Washington, D.C. during the summer of his junior and senior years, performing fire and safety inspections on Capitol Hill.

Now a graduate student, Baker is working on a National Institute of Standards and Technology (NIST) grant to study fire egress and evacuation patterns. "NIST has recorded videos that we are studying," says Baker. "We are reviewing data from five different buildings and actual evacuations during fire drills -looking at measurements such as the movement of the group, the distance between individuals and their exit speed."

His experiences raised his awareness of the importance of fire protection engineers in federal agencies. "If there is a threat of terrorism, if awareness must be raised about public safety, if new buildings and structures are required, fire protection engineers must be involved," explains Baker. "As regulations and laws change, the demand for their expertise is greater."

As he completes his master's degree, Baker is pleased with his Clark School career. "I always wanted to be a Terp. The Clark School was my first choice, and I haven't been disappointed."

Aspiring Dentist Turned Fire Protection Engineer

For **COLLEEN FRANCES**, B.S. '12, it has been an unconventional route to fire protection engineering. "I originally wanted to be a dentist," explains Frances. "I was a biology major for my freshman and sophomore years, but it was not for me." As she was struggling through biology courses, Frances recalled her affiliation with the Maryland State Firefighters Association as Miss Fire Prevention in 2008. "I served as an ambassador for fire protection engineering and public safety. I enjoyed teaching people how sprinklers and smoke detectors work," recalls Frances.

During her junior year, Frances transferred to the Clark School to major in fire protection engineering. In coursework with Jim Milke, chair of FPE, she began studying how people respond to fire, particularly during evacuations. "This field requires a good deal of detective work, which makes it an interesting career choice," says Frances, who is interested in conducting forensic work with a federal agency. She has also conducted fire enclosure testing with a graduate exchange student from Italy in preparation for her master's thesis. "We set fires of different strengths in a 12 x 12 area with six-foot high ceilings," describes Frances. "Then we use sensors to measure light, temperature and humidity when the fire detectors are activated." Frances looks to continue the work as she pursues her master's degree.



Frances has served as vice president of the Salamander Fire Protection Engineering Honorary Society Beta Chapter, working with new inductees to guide them through induction process. She coordinates and plans the induction banquet.

It has not been all work and no play for Frances, who participated in Gymkana, the Maryland Gymnastics Troupe, that won a place on the NBC reality show "America's Got Talent" this summer. Frances heads the Gymkana music selection committee and was part of the ladder act in which six gymnasts balance their feet from a pair of 20-foot-high ladders held up by two of the teams strongest members while the remaining six gymnasts flip around them.

One of her favorite things about her college experience: the small size of the FPE department. "You get to know the students and faculty," says Frances. "You always have a good time in the courses. I have enjoyed my experience 110 percent."

Faculty Research Update

MARINO DI MARZO, PROFESSOR AND DIRECTOR OF FACILITIES FOR THE A. JAMES CLARK SCHOOL OF ENGINEERING:



The Department of Homeland Security has funded a multi-year program to enhance firefighter gear performance, which Di Marzo is overseeing. During the past six months, the Shape Memory Materials (SMM) devices were implemented in commercially available turnout gear. From November 28 to December 9, 2011, 80 tests were conducted at MFRI using standard gear and the SMM enhanced gear. Data, recording

exposure time, maximum temperature inside the gear, heating rate during exposure consistently showed a 20 percent improvement for the SMM enhanced gear. The department is also considering a possible manufacturing solution to mass produce the SMM devices in the near future as well as finalizing the gear, and heating rate during exposure, modifications in cooperation with Lion Apparel.

ASSOCIATE PROFESSOR ANDRE W. MARSHALL:



Marshall's recent research has focused on fire suppression initiatives. He has submitted a National Science Foundation (NSF) Major Research Instrumentation (MRI) proposal focused on a new sprinkler spray measurement system, Spatially-resolved Spray Scanning System (SSSS), that would provide sprinkler discharge characteristics with unprecedented detail. This system has been submitted as a

university invention for patent filing and commercialization. Marshall has also been working with Professors Arnaud Trouvé and Peter Sunderland, FM Global and United Technologies to develop an NSF Grant Opportunities for Academic Liaison with Industry (GOALI) proposal to explore fire/spray interactions in water-based suppression systems.

JOHN L. BRYAN PROFESSOR JAMES G. QUINTIERE:



Quintiere received the Kunio Kawagoe Gold Medal Award from the International Association of Fire Safety Science in 2011 in recognition of life-long contributions and career achievements in fire science and engineering. Quintiere will retire from the University of Maryland this year after 22 years with the department. He joined the department in 1990 as professor and in 2001 was named The John L. Bryan

Professor in Fire Protection Engineering.

ASSISTANT PROFESSOR STANISLAV I. STOLIAROV:



In 2011, Stoliarov obtained a new \$144,000 grant from the Federal Aviation Administration to develop flaming combustion calorimetry for mg-sized material samples. He is in the process of securing funding from BASF for a project using a cup-burner device and a microscale combustion calorimeter to study the effectiveness of flame retardant additives.

ASSOCIATE PROFESSOR ARNAUD TROUVÉ:



Trouvé has been invited to serve as program co-chair of the 11th International Symposium of the International Association for Fire Safety Science (IAFSS) in New Zealand in 2014. Trouvé was chair of the Host Committee at the 10th Symposium on campus last year. In addition, Trouvé has been renewed as a member of the Executive Board of the U.S. Eastern States Section of the Combustion Institute. He has also

been invited to become chair of the Executive Committee of the U.S. Sections of the Combustion Institute.

Trouvé has been invited to join the editorial board of *Progress in Energy and Combustion Science*. He currently serves on the editorial boards of *Combustion Theory and Modelling*, *Proceedings of the International Symposium on Combustion, Combustion and Flame and Fire Technology*.

He co-authored two papers submitted for presentation at the 34th International Symposium of the Combustion Institute. The first paper, co-authored with French researchers, focuses on a novel application of data assimilation techniques to wildland fire spread modeling. The second paper, co-authored with Ning Ren, an FPE postdoctoral fellow, and Yi Wang of FM Global, discusses an application of the fire model FireFOAM to simulations of wall fires. Both Ren and Wang are former FPE doctoral students.

ASSOCIATE PROFESSOR AND KEYSTONE PROFESSOR PETER B. SUNDERLAND:



Sunderland and graduate student Yi Zhang are observing inverse flames in the J. M. Patterson laboratories in work sponsored by the National Institute of Occupational Safety and Health (NIOSH). The research is intended to assess the hazards of firefighter respirator leaks in under-ventilated fire that can result in inverse flames. The experiments emphasize the smallest leaks that can sustain flames or "quenching limits." Quenching

limits of normal flames have been widely reported, but this work represents the world's first measurements of inverse flame quenching limits. The experiments involve different fuels, oxidizers and burner diameters. Small quenching limits show the importance of minimizing leaks in SCBA equipment.

GLENN L. MARTIN PROFESSOR HOWARD R. BAUM:



Baum presented the Third Elsevier Distinguished Lecture on "Simulating Fire Effects on Complex Building Structures" at New Jersey Institute of Technology in 2011. Published in *Mechanics Research Communications*, the lecture will be made available to a wider audience through SciPlayer, a new resource under development by Elsevier Limited that is intended to serve as a YouTube for science. "A Comprehensive Methodology

for Characterizing Sprinkler Sprays," a paper co-authored by Baum, Andre Marshall and Ning Ren and presented at the 33rd International Symposium on Combustion, was selected as the Distinguished Paper in the Fire Research Colloquium. This award has only been given three times, and Baum co-authored two of the winning papers.

RESEARCH ASSOCIATE PROFESSOR MARC R. NYDEN:



Nyden has joined the department as a research associate professor. He has a Ph.D. in chemistry from Wesleyan University and a B.S. in chemistry from the University of Bridgeport. He joined the building and fire research laboratory of the National Institute of Standards and Technology (NIST) as research chemist in 1986 and worked there until his recent retirement. Nyden has published over 100 papers, reports and proceedings and

is nationally and internationally recognized for his work in reactive molecular dynamics modeling.

RESEARCH PROFESSOR TAKASHI KASHIWAGI:



Kashiwagi retired from the department in 2011 after more than 10 years as a research faculty member. Kashiwagi came to FPE after a distinguished career at the National Institute of Standards and Technology (NIST), where he also continued as a guest researcher. Most recently, Kashiwagi has demonstrated that the more widely and uniformly dispersed nanoscale plates of clay are in a polymer, the more fire

protection the nanocomposite material provides. The NIST-UM team found that with better dispersion, clay plates entangle more easily when exposed to heat, thereby forming a network structure that is less likely to crack to provide a heat shield that slows the rate of degradation and reduces flammability.



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Strengthening the Alumni Network

A group of energetic FPE alumni is exploring ways to preserve the strong ties FPE graduates maintain with the department and one another. The strengthened alumni network will: facilitate communications between alumni and the department; arrange alumni events regionally or at national professional meetings; support recruitment activities for new students; provide course support through guest lectures, materials and case studies; mentor undergraduates in independent study projects; and assist with fundraising.

The annual alumni dinner at the NFPA Conference and Exposition in Las Vegas will be held on Tuesday, June 12, 2012. More details will be made available through the department website and also through the alumni network. A website has been created, www.TerpFPE.com, and will contain more information soon. More information on the Alumni Network will be presented at the alumni dinner or may be obtained by contacting Tom Gardner, B.S., '86, at 678-485-6252 or tgardnerfire@comcast.net.



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SCHOOL OF ENGINEERING

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Online Master's Program Reaches Milestone



The department is committed to providing lifelong learning opportunities to the fire protection community. Since its inception in 2003, the FPE online master's program has served the FPE community worldwide, reaching students in 23 states and seven countries. In 2011, the number of online program graduates reached 105. Online FPE master's graduates totaled 22 in 2011 making it the largest online graduate program in the Clark School of Engineering.

The department also offers an online Graduate Certificate in Engineering program in FPE primarily for engineers that may hold master's or doctoral degrees but want to update their knowledge or transition from different academic disciplines to FPE. The certificate can be a steppingstone to an advanced degree. For more information on the FPE online programs, see www.advancedengineering.umd.edu/.



Renewal of FPE Program in Midwest

The University of St. Thomas (UST) in St. Paul, Minnesota and the University of Maryland have announced a joint agreement to promote a Master in Fire Protection Engineering program in the Twin Cities region of Minnesota. The program, focused exclusively on the practice of fire protection engineering, will be the first such program in the Midwest in 25 years.

The 30-credit master's program began this spring. Coursework is a combination of on-campus work at the UST and distance learning with FPE. The Memorandum of Understanding between the two institutions allows selected graduate program courses from the UST to apply directly to the FPE Master of Engineering program. Interested students who hold degrees in engineering are encouraged to apply.

For more information, visit www.stthomas.edu/engineering and www.oaee.umd.edu/grad/fire/.