### SUMMER/FALL 2015



# FIRE PROTECTION ENGINEERING A. JAMES CLARK SCHOOL of ENGINEERING

### fpe.umd.edu



JIM MILKE, PH.D, P.E., FSFPE, B.S. '76 PHOTO BY AL SANTOS

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HOTLINE IS PUBLISHED FOR ALUMNI AND FRIENDS OF THE DEPARTMENT OF FIRE PROTECTION ENGINEERING AT THE A. JAMES CLARK SCHOOL OF ENGINEERING, UNIVERSITY OF MARYLAND. YOUR ALUMNI NEWS AND COMMENTS ARE WELCOME. PLEASE SEND THEM TO:

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EDITOR/DESIGNER: FAYE LEVINE

#### JIM MILKE PROFESSOR AND CHAIR

Since our last issue, Dr. **Stanislav 'Stas' Stoliarov** has been promoted to associate professor, effective this August. Dr. Stoliarov joined us in 2010 and has been a key contributor to the department's activities in the area of material flammability.

**Ken Isman** completed his first year with us. He taught several classes involving fire suppression and detection systems, and assisted with the Capstone design course. The reaction from students was outstanding!

The department graduated over 40 B.S., M.S. and M.Eng. students in May. In addition, one Ph.D. was granted to Dr. **Haiqing Guo**, who studied under the direction of Dr. **Peter Sunderland**.

The inaugural group of Distinguished Alumni was recognized at the Alumni Dinner in June at the NFPA Conference in Chicago. In addition to the recognition at the dinner, a display was created of the 11 Distinguished Alumni in the entrance hallway to the department offices. The list of this year's awardees and a photo of the hallway display are available at go.umd.edu/ fpedinner2015. Nominations for the 2016 class of Distinguished Alumni are now being sought. Please submit the names of those alumni who you think have made outstanding achievements in the field and/or significant contributions to the department to Chris Dubay at cdubay@nfpa.org with a brief description as to why you feel they should be honored.

### Expanding Our Outreach

In the last newsletter, I discussed the collective effort underway to enhance our recruiting activities. This began last fall, and continued in the spring with a new set of print materials for the undergraduate and graduate programs. **Nicole Hollywood** has created a Powerpoint presentation that can be sent along with print materials to any alumnus or alumna willing to attend career fairs at high schools or community colleges around the country. Contact nlholly@umd.edu for a copy of the file.

We also completed a cooperative effort with an engineering instructor at Elizabeth Seton High School in Bladensburg, Md. *(see p. 4),* and hope to expand it next year. The "Intro to Math and Physics through Fire Dynamics" program, offered twice a year for the last two years by Ph.D. student **Isaac Leventon**, will continue and was recently recognized by Prince George's County Schools as being eligible for high school credit.

This spring, Ms. **Marah Taylor** left us to take a full-time position elsewhere on campus. While with us in a part-time capacity, Marah contributed significantly to the department in many ways. We wish her well in her future endeavors. Until a new person fills her position, please direct any job postings to enfp@umd.edu.

Jim Milke, Ph.D., P.E., FSFPE B.S. '76, FPE

### INSIDE: FPE DESIGN CHALLENGE | WILDFIRE RESILIENCE | STUDENT & ALUMNI NEWS

# educationnews

# Capstone Design Project 2015: National Museum of the American Indian

Located on the National Mall in Washington, D.C., the National Museum of the American Indian is one of the Smithsonian's most striking buildings. In Spring 2015, FPE seniors at the University of Maryland were assigned to propose how they would protect the museum, its visitors, and its collection of cultural heritage objects, art and photographs from fire. The challenge was part of the department's annual Capstone design course, ENFP 411: Risk-Informed Performance Based Design.

Capstone courses, taken in the senior year, are among the most important in the A. James Clark School of Engineering's undergraduate programs. In them, teams of students utilize what they have learned throughout their studies to create their own engineering design or product to solve a real-world problem in their field.

In ENFP 411, students evaluate a building selected by the department's alumni, identify potential fire scenarios, and develop trial designs for systems that will protect the people and property within. After presenting their design briefs to a review panel of three professional fire protection engineers, each team must evaluate their trial designs against various fire scenarios using advanced calculations and computer modeling. Past subjects have included a library located on top of a subway station, an art museum in Williamsburg, Va., and a historic mansion that had been converted into a conference center.

The course focuses on teaching the students to use performance-based design (PBD) to propose effective solutions. As part of PBD, students need to conduct engineering analyses, often including Fire Dynamics Simulator (FDS) models or empirical calculations, to justify their decisions and demonstrate that they have met stipulated goals and objectives. Following a PBD approach provides designers with increased flexibility to create more effective and efficient fire safety systems.

According to Clinical Professor **Ken** Isman, who co-taught the course with Professor and Chair Jim Milke, the unusual and swooping design of the National Museum of the American Indian made it a challenging subject.

> "The architect wanted an open and inviting layout with no walls or separations between the exhibit space and the atrium," he explains. "In addition, the architect wanted to use the atrium as the method to move people from floor to floor as they visited the various exhibits. While all of this open space is beautiful to behold, it causes



problems from a fire protection perspective. With no barriers, smoke and toxic gasses from a fire can quickly spread throughout the building, exposing people and property to injury and damage."

All museums, he adds, create challenges for fire protection engineers because the goals and objectives are elevated. In addition to ensuring the safety of the people and the structure, the fire protection engineer is also tasked with protecting the valuable artifacts in museum's collection, which are frequently irreplaceable.

The student teams used calculations and FDS to prove that the systems they proposed for the building could keep smoke in the massive atrium at a great enough height to prevent people from being exposed to it in the event of a fire. Isman arranged tours with the museum's fire protection engineer so the students could experience the space learn more about its special needs.

"We couldn't just say, 'We chose [options] A, B and C.," says **Jon Scheer** (B.S. '15), who took the course this spring. "We had to say, 'We chose A, B and C instead of G, H and I because of this, that and the other.' It forced us to really think critically and made us use all the knowledge we'd compiled over the last four years."

#### WHAT IS MPACT?

ENGINEERS HAVE THE UNIQUE CAPABILITY TO INNOVATE AND DESIGN NOVEL PRODUCTS AND FIND NOVEL SOLUTIONS THAT CAN IMPROVE MILLIONS OF LIVES. AT THE CLARK SCHOOL WE PLACE A SPECIAL EMPHASIS ON TRANSFORMING FEARLESS IDEAS INTO NEW INNOVATIONS THAT BENEFIT MILLIONS. THIS IS WHAT WE CALL "MPACT."

"Wildfires are a global problem," says FPE assistant professor **Michael Gollner**. "A big one." In the U.S. alone, these disasters, including six of the nation's top ten most destructive fires, have destroyed 38,000 homes in the past 15 years. Despite the growing danger, he adds, only a handful of comprehensive studies on community fire resilience have been conducted.

Because actual wildfires provide only limited opportunities to safely collect data and diagnostic information, Gollner's research group and its collaborators use a variety of approaches to study them, from the lab to the environmental scale. These include live burns of scale models in simulated conditions, computer modeling, remote sensing, ignition experiments, characterizing the burning behavior of different fuel sources, using imagery from satellite observation systems, data assimilation, and geographical and atmospheric science.

The National Fire Protection Association (NFPA) asked Gollner to examine how fire spreads where nature meets human development (a zone called the wildland-urban interface), identify gaps in current knowledge, and propose prevention and protection strategies. He recently completed the study and coauthored a report with three FPE undergraduates from his research group: **Raquel Hakes, Sara Canton**, and **Kyle Kohler** (B.S. '15).

There are three ways in which wildfires can ignite homes, and homes can ignite each other, Gollner explains. The first is radiative heat, which is transferred through space, and was originally thought to be the cause of most ignitions. The second is direct flame contact from small fires. Firebrands the little embers that fly through the air are the third and the most insidious, because they can land, smolder, and ignite miles away and hours later, far from the actual fire front. All of these paths are affected by variables including the weather, terrain, plant life, physical barriers, construction materials, and housing design and density, making wildland-urban interface fire behavior inherently difficult to predict.

Communities need to ensure they can provide sufficient water and safe zones for firefighters, an evacuation plan for residents, and multiple routes out of town. But what about the homes and property left behind?

Gollner answers the question with one of his own: "What if you design your home and community so that they can't be ignited in the first place?" That's very difficult, he concedes, but there are many things communities can do that

can mitigate or prevent damage. And the most important of those things, he says, is applying fire protection principles to the *exteriors* of our homes.

"Once it's in the community, the fire is going to travel from house to house, not tree to tree," he

explains. "Detection and suppression systems are designed for the inside of your home. But they don't account for your roof or your attic, which is where many fires ignite. If the attic is on fire and the home's sprinklers go off below, not only are they ineffective, they're also wasting the water and lowering the pressure the firefighters need."

It is imperative that old roofs be replaced with those made from fire-resistant materials, he says. Debris must be cleared from gutters. Trees, bushes and mulch should not come within five feet the home. The lower branches of the trees in or bordering the community can be trimmed off to help keep the fire low to the ground, which reduces fire intensity and makes it easier to suppress. Homes should be built farther apart. Power lines should be buried,

# research Mpact

# Designing Communities for Wildfire Resilience

or at least kept clear to prevent the loss of electricity required to run water pumps, utilities, and hospitals. Towns need to think more strategically about their perimeters by examining what separates them from the wilderness, and how wide that separation is. Individual homeowners must be aware of how fire could spread from neighboring properties, and customize their protection strategies accordingly.

In Fall 2015, Gollner introduced undergraduate and graduate students to this crucial area of research in a new course, ENFP 489W/629W:Wildland Fires:



Science and Applications. Students learned about designing buildings to resist ignition, wildfire spread, community planning, community resilience, NFPA and ICC Codes, and modeling tools such as FARSITE. The course also featured lectures and demonstrations from members of the U.S. Forest Service and the Maryland Department of Natural Resources Forest Service.

Gollner hopes that his work, and the work of his colleagues and students, will generate and contribute to the data needed to build meaningful statistics and more accurate strategies for planning and protecting our homes.

"I think the wildland-urban interface is one in which fire protection engineers can have the greatest impact in the field of community resilience," he says.

### **OUTREACH**

## FPE Design Challenge Gets High School Students Excited About Engineering

Students from Elizabeth Seton High School (ESHS) were the first to earn the title of "junior fire protection engineers" after participating in a new program at the University of Maryland. The program, called the FPE Design Challenge, was created and presented by FPE students.

In addition to providing an introduction to FPE, the program also introduced participants to creative design and construction, and required them to formulate and test hypotheses using the scientific method. The program's goals were to encourage the students to consider careers in science, technology, engineering and math (STEM), and to help them gain confidence in their ability to succeed in those fields.

The FPE Design Challenge was conceptualized by FPE professor and chair Jim Milke and FPE assistant director Nicole Hollywood. They believed that a competition inspired by the one held in the Clark School's Introduction to Engineering Design course would be a good way to get high school students, particularly young women and members of underrepresented minorities, engaged and interested in engineering. After refining their ideas with the help of department undergraduates **Cara**  Hamel and Raquel Hakes, Milke and Hollywood recruited Ph.D. student **Taylor Myers** (B.S. '12, M.S. '14) to develop the curriculum and lead the program.

Myers, Hamel and Hakes enlisted three additional FPE undergraduates – **Sara Caton**, **Nate May**, and **Jon Scheer** – to help create lessons covering core fire protection strategies such as compartmentalization, ventilation, material flammability, detection, and suppression, which could be incorporated into projects.

Hollywood and Myers pitched the completed curriculum to the all-girls Elizabeth Seton High School, after Hamel, an ESHS alumna, connected them with its principal and president, Sister **Ellen Marie Hagar**. The school agreed to make the FPE Design Challenge part of its STEM program. Myers and his team provided the instruction, most of which took place on the ESHS campus.

The program's final competition focused on the design of a home fire protection system. Students were asked to apply what they had learned to design and build a scale model house capable of resisting fire spread. They brought their models to FPE's Rolf Jensen and Associates Fire Science

> Laboratory in College Park, where they were put to the test in live burn experiments.

It was ESHE alumna **Myranda Hinkson**'s favorite part of the project.

"I found it really interesting to see how well, or not so well, all of the different designs from each group ended up working,"



she says, adding that the program made her more aware of how science is used in real world contexts, and increased her interest in FPE. Hinkson is now attending UMD.

"The students were very excited by the project, dedicated a large amount of personal time to it, and showed tremendous creativity," says Myers.

One team, for example, used popcorn as part of their alarm system. Another built their home and everything in it (including the furniture) out of cement board. While this level of Brutalist design would be a hard sell in the 21st century real estate market, Myers admits that when it came to fire protection, it worked well.

"Our best metric for fire damage was the percentage of mass loss, which tells you how much of the structure burned," he says. "Our Brutalist house suffered 0% mass loss, with no noticeable change. In contrast, the worst performing house lost 18% of its mass, and was completely destroyed."

He describes the feedback he's received as almost entirely positive, and is already preparing for a Spring 2016 cohort. "We'd like to bring the program back, with slightly different requirements and improved lessons, to Elizabeth Seton and possibly another school," he says.

Milke, meanwhile, is working with Scheer, now a student in FPE's Master of Engineering program, on translating the FPE Design Challenge into a 100-level undergraduate engineering course.



ESHS STUDENTS BUILDING THEIR MODEL HOUSE.

### **OUTREACH**

### Getting a Head Start on a Career In Computer Science with FPE

**Tamfor Dulin** knew he wanted to pursue a career in computer science or computer engineering. He wanted to improve his programming skills before heading off to college, but his high school didn't offer any classes on the subject, and he didn't have a lot of free time to teach himself. He found a hands-on solution in a place many people wouldn't have imagined: an internship with FPE at the University of Maryland.

Dulin, a recent graduate of School Without Walls High School in Washington, D.C., combined his senior science fair project and internship requirements by

spending two semesters in FPE assistant professor **Stanislav Stoliarov**'s research group, where he was mentored by **Isaac Leventon** (Ph.D. '15). Dulin met Leventon while participating in FPE's Introduction to Math and Physics through Fire Dynamics program, which Leventon designed and ran.

Programming, simulations, data crunching and modeling are all tools fire protection engineers use to protect people, property and the environment. When Dulin transfer. Key calculations include the temperature, composition, reaction rates, heat transfer, and the contraction and expansion of the sample material. Stoliarov believes that the development of accurate modeling tools like ThermaKin2D will make it easier to design materials for the right balance of fire safety, cost, and mechanical properties.

"Currently, ThermaKin2D needs two files, Components and Conditions, that need to be manually created by the user," Dulin explains. "[It's] a tedious process for all users and a difficult task for new users. and college applications," says Leventon. "He's succeeded in this project because he was able to make it his own and see it as a design challenge that he'd find a way to and want to solve. I think that's a big part of what makes engineering fun. We got to a point where he was leading the development of the project. I really couldn't have hoped for more when we started."

In spring 2015, Dulin was invited to the D.C. STEM Fair, where his presentation and poster on the ThermaKin2D GUIs won first place in the Computer Science category's Senior Division. He was also

> invited to participate in the 38th Annual Robert H. Herndon Memorial Science Competition, hosted by The Aerospace Corporation in Chantilly,Va.

Dulin says his internship strengthened not only his programming knowledge and desire to pursue a career in the computer industry, but also his confidence in his own skills. He is now far less reliant on having to look up answers or ask for help. The best thing about the experience, he says, was the support he

received from Leventon.

"We have a great connection and it [didn't] seem like I [was] working for him, but rather with him," he says. "I now enjoy challenges...I learn so much and it is a fun process."

Dulin is now attending the University of Maryland Baltimore County (UMBC), where he plans to major in computer science or computer engineering.

reached out to Leventon to ask for help in finding a mentor for his senior project, Leventon saw an opportunity that would benefit them both.

In his internship, Dulin was tasked with creating two graphical user interfaces (GUIs) for ThermaKin2D, a continuum pyrolysis modeling environment created by Stoliarov and his group. ThermaKin2D simulates material degradation and burning behavior in response to external heat



TAMFOR DULIN (LEFT) WITH PH.D. STUDENT ISAAC LEVENTON (RIGHT).

Despite a steep learning curve that required him to learn a new programming language, Dulin was up to the challenge.

"I was impressed by the time and effort that Tamfor put in to figure things out as we worked together, especially while keeping up with his regular coursework



# alumninews

# Alumni Publish Book Based on FPE Course They Co-taught

Performance-Based Fire Safety Design



FPE alumni **Morgan Hurley** (B.S. '90, M.S. '00) and **Eric Rosenbaum** (B.S. '85, M.S. '97) have authored a new book, *Performance-Based Fire Safety Design*.

Performance-Based Fire Safety Design addresses deterministic and risk-based analysis techniques, development of design fire scenarios, trial design development and analysis, and building lifecycle management. The book also covers designing to protect people from fire, performance-based design of detection systems, smoke control systems and structural fire resistance, addressing computational and design uncertainty, and fire testing to support design development or evaluation.

"Eric and I wrote the book using course notes that we created while teaching ENFP 662," Hurley, a project director based in Aon Fire Protection Engineering's Washington, D.C. office, explains. The pair has co-taught the online course, Performance Based Design, since the launch of FPE's online master of engineering program ten years ago. "While there are several references available to assist fire protection engineers with performance-based design, what we felt was lacking was a how-to guide that walked readers through each step of the process."

Rosenbaum, a Vice President at JENSEN HUGHES and the Chairman of the SFPE Task Group on Performance-Based Analysis and Design, says the book was designed to serve a wide audience.

"We hope the book is a useful reference for experienced fire protection engineers who are well-versed in performance-based design, for fire protection engineers who are just learning performance-based design, or architects or other members of the design team that would like to learn more about performance-based fire safety design," he says.

# Alumnus Appointed Executive Director of NFPA's Fire Protection Research Foundation

Story by Lorraine Carli, reproduced courtesy of Peg O'Brien, Communications Administrator, NFPA.

**Casey Grant** [PE, B.S. '81] has been named executive director of the Fire Protection Research Foundation. The Foundation, an affiliate of the National Fire Protection Association (NFPA), manages research on a broad range of fire safety issues in support of the NFPA mission.

"Casey brings years of experience with the Foundation and NFPA and deep research expertise to his new leadership role," said NFPA President **Jim Pauley**. "Through his great accomplishments directing a wide-range of research, Casey is uniquely qualified to lead the Foundation in advancing NFPA's mission."

Grant previously served as research director for the Foundation. He is a registered professional engineer in fire protection engineering in the states of California and Tennessee and is a fellow of the Society of Fire Protection Engineers and the Institute of Fire Engineers. Prior to joining the Research Foundation in 2007, Grant was the secretary of the NFPA Standards Council and assistant chief engineer for nearly 20 years. He holds a Bachelor of Science degree from the University of Maryland and a Master of Science degree from Worcester Polytechnic Institute, both in fire protection engineering.

About the Fire Protection Research Foundation

The Fire Protection Research Foundation plans, manages, and communicates research on a broad range of fire safety issues in support of the NFPA mission. The Foundation is an affiliate of NFPA.

#### About the NFPA

NFPA is a worldwide leader in fire, electrical, building, and life safety. The mission of the international

nonprofit organization founded in 1896 is to reduce the

worldwide burden of fire and other hazards on the quality of life by providing and advocating consensus codes and standards, research, training, and education. NFPA develops more than 300 codes and

standards to minimize the possibility and effects of fire and other hazards. All NFPA codes and standards can be viewed at

no cost at www.nfpa.org/freeaccess.

# studentn≡ws



### Singh Among Top 2% of UMD Graduate Assistants

Ajay Singh (Ph.D. '15), advised by FPE assistant professor Michael Gollner, received a 2015 Outstanding Graduate Assistant Award from the University of Maryland Graduate School. According to the Graduate School's web site, "Approximately 4,000 UMD graduate students also serve the campus as administrative, research, or teaching assistants. The Graduate School has established this new award to recognize and honor the outstanding contributions that [they] provide to students, faculty, departments, administrative units, and the University as a whole. The award conveys the honor of being named among the top 2% of campus Graduate Assistants in a given year."

Singh and his fellow awardees were recognized at UMD's Annual Fellowship and Award Celebration in May 2015.

In 2015, Singh also won the Northrop Grumman Graduate Fellowship in Engineering Education, which is awarded to doctoral students committed to a teaching career in engineering education; and a Distinguished Paper Award at the 35th International Symposium on Combustion for his presentation of a new model that describes the relationship between a burning fuel's temperature gradient and its mass burning rate.



### Myers: All S.T.A.R. Fellowship

The University of Maryland Graduate School awarded Ph.D. student **Taylor Myers** (B.S.'12 and M.S. '14, fire protection engineering, below at left) an All-S.T.A.R. (Scholarship, Teaching, Administration, Research) Fellowship in recognition of both his outstanding scholarship and service as a graduate assistant. The award includes a \$10,000 stipend.

"Taylor's technical curiosity and enthusiasm are truly inspiring," says Myers' advisor, FPE associate professor **Andre Marshall**. "He is a powerful catalyst for my research team and the entire department."

Myers' dissertation research is part of a larger project titled "Quantifying Fire-Spray Interactions," which is facilitated by the National Science Foundation's Grant Opportunities for Academic Liaison with Industry (GOALI) program. GOALI promotes university partnerships with industry by supporting interdisciplinary, high-risk/high-gain research.

"My [work on] the project focuses on developing [computational] models that predict the atomization and dispersion performance of fire sprinkler sprays," he explains. "Although fire sprinklers are the most widely used fire suppression systems in the world, present models of sprinkler performance are very limited. Better models would improve both the design and implementation of these sprinklers, and consequently save property and lives."

Myers, who plans to pursue career in academia, is a member of the Clark School's 2015 Future Faculty Program cohort and has served as a TA for FPE's graduate-level course on fire and explosion investigation and reconstruction (ENFP 629N). He is often seen participating in FPE outreach activities, including the FPE Design Challenge (see p. 4), a new semester-long program for young women attending Elizabeth Seton High School in Bladensburg, Md. The program guides students through a hands-on fire protection engineering design project. Myers created the curriculum and managed a team of undergraduates who helped him teach.

Outside of his studies, Myers is the CTO of MF Fire LLC, a startup company he cofounded with fellow FPE alumnus **Ryan Fisher** (B.S. '12 and M.S. '13). MF Fire is working to commercialize Mulcibler, a near-emissionless, 93% efficient wood stove. The company and its product have won numerous awards in technology- and energyoriented competitions, and have been profiled by *Popular Mechanics*, the *New York Times*, the *Washington Post*, and *National Geographic*. In 2014, the *Maryland Daily Record* named Myers one of its Innovators of the Year for his role in developing Mulciber.

### recentGRADUAT

#### MAY '15 B.S. GRADUATES

Asiamah, Samuel Aviles, Anthony Caton, Sara Chacinski, Alexander Chuchman, Daniel Cottrell, Ryan Dodson, Adam Fuecker, Dominic Gentzel, Matthew Hamel, Catherine Harris, Michael Ives, David Jin, Shelley Kelly, Kieran Kilpatrick, Jonathan Kohler, Kyle Kramer, Bernard Lomax, Peter McCoy, Conor Pascale, Nathan Pierce, Tyler Royle, Sara Scheer, Jon Steranka, Kristin

Sutton, Michael Valdivia, Kevin Van Elburg, Daniel

#### MAY '15 M.S. GRADUATES

Briggs, Christopher Korver, Kevin Wills, Rosalie

#### MAY '15 M.ENG. GRADUATES

Bruce, Charles Chan, Cathy Chowdhury, Munirul Herald, Pamela Kidwell, Kelly Schieber, Alex Taggart, Andrew Woon, Trevor Almandil, Khalid Ong, Yuan Wei Ryan Roberts, Andrew

MAY '15 PH.D. GRADUATES

Guo, Haiqing

# 2015 honors & AWARDS

Congratulations to the following students, who have all demonstrated outstanding scholarship, research skills, and service. Complete citations are online at: ter.ps/fpeawards15

The FPE Chair's Award: Nathaniel May and Raquel Hakes

Outstanding Senior in FPE and The Clark School Dean's Award: Catherine Hamel

FPE Robert J. Taylor Academic Achievement Award: Nick Schraffenberger

The Center for Minorities in Science and Engineering Service Award: Ingrid Turcios

Outstanding Sophomore in FPE: Casey Beall

# 2015 SOCIETYOFFICERS

### SALAMANDER

President: Jessica Tilles, '16 Vice-President: Samiyah Mustafa, '15 (Fall) Secretary: Irene Lemberos, '16 Treasurer: Nick Schraffenberger, '16 Outreach: Nathaniel May, '15 (Fall)

#### SFPE

President: Julie Dicus, '16 Vice-President: Stephanie Poole, '16 Secretary: Jon Sajdak, '16 Treasurer: Rachel Lilienfeld. '16

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# campaignupdat ...

PRESERVE OUR LEGACY SAFEGUARD OUR PROFESSION FOSTER IMPACT

AFSA ANNOUNCES SUPPORT

#### The American Fire Sprinkler

Association (AFSA) announced a \$25,000 financial commitment to the Legacy Campaign. AFSA President Steve Muncy stated: "...we are proud to continue our support in the development of future fire protection engineers by becoming a corporate sponsor in this important campaign. This is an investment in the future of our industry and our member companies."

YOU CAN HELP

THANK YOU to all of the

generous donors to the Legacy

Campaign. Your investments have

already had an impact on students

who are being exposed right now to the applied side of the profes-

sion by inaugural professor of the

As many of you are aware,

we were able to bring Ken on board through the generosity of

dean of engineering Dr. Darryll Pines. However, that support

ends on June 30, 2016. If you've been considering your own gift

to this campaign but have not yet made one, our Development

Officer, Allison Corbett, would love to talk to you. You can reach

her at acc@umd.edu or by phone

SPONSORS

RIGHT: OUR CORPORATE

practice Ken Isman.

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