



A Final Message from the Chair, Dr. Jim Milke

The last 12 years serving as the UMD Department of Fire Protection Engineering Chair have been very fulfilling. This positive experience is largely attributable to working with an incredible group of faculty, staff and supportive deans: Drs. Darryll Pines, Robert Briber and Samuel Graham. I also want to acknowledge the strong financial support from our corporate partners and alumni. Having a group of our alumni promote an initiative to name the clinical professor position in the department after me is something I could never have imagined. It was also an honor to be nominated and selected for the National Fire Protection Association (NFPA) 2023 *Distinguished Service Award*.

I truly believe that with the current group of faculty and staff, and with Dr. Arnaud Trouvé having the motivation to be the next department chair, the department trajectory will continue upward. The recent accomplishments by the faculty highlight the talent we have in the department.

Dr. Shuna Ni and the team of Drs. Fernando Raffan-Montoya, Arnaud Trouvé and Lina Castaño (Aerospace Engineering) won awards from the Provost's Grand Challenge Grant program. With 50 total awards being offered via this program, our two awards are quite noteworthy. Descriptions

of their projects can be found at these links:

- go.umd.edu/shuna-dual
- go.umd.edu/fpe-collaboration

The department activities led by Arnaud, but involving all of our faculty with the International Fire Safety Consortium (<https://intlfire.org>) had two notable achievements: 1) providing an open access webinar series on wildfires; go.umd.edu/fpe-openaccess, and 2) the Burgers Program and Combustion Institute Summer School on wildland fires where FPE faculty joined with internationally recognized speakers to provide a 5-day program, which attracted graduate students and postdocs from many countries to discuss the global challenges of wildfires; <https://ssfss2023.umd.edu/>

Dr. Peter Sunderland received a 3-year grant from the National Science Foundation for his research on cool pool diffusion flames that have been observed in experiments on the International Space Station he supervised. Learn more here: <https://go.umd.edu/pbs-nsf-23>

Dr. Stas Stoliarov received the 2022 *Sjölin Award* given by the International FORUM of Fire Research Directors. He also delivered a keynote lecture, "Understanding Dynamics of Fire Growth: Challenges and Opportunities," at the U.S. National Combustion Meeting this past March.

It has been an honor to serve our community and I look forward to continuing my relationship with the fire science community as a whole, albeit in a less formal capacity.

Jim Milke, Ph.D.

Online Curriculum Update

Since 2021, the Department has been studying the prospect of offering its undergraduate courses via an online delivery mode in addition to its existing on-campus mode. The feasibility of offering courses online was demonstrated during the height of the COVID pandemic when all courses were offered remotely for an academic year.

We perceive that there is appreciable interest in this option based on results from an informal survey we conducted in 2022. Since we received positive feedback about the concept from the dean's and provost's office and an array of other campus officials, we'll be submitting a formal proposal in the coming months to provide our courses via an online delivery mode. If approved, we plan to offer our undergraduate courses online in the Fall 2025 semester.

We'll provide more information about this initiative on our website and subsequent newsletters, but the essential highlights are:

- Admission and degree requirements will be **unchanged** and **identical** for students taking ENFP courses either online or on-campus.
- The **content** and **rigor** of online ENFP courses will be equivalent to on-campus courses.
- The online courses will be **taught separately**; not to be offered simultaneously with on-campus courses.
- The proposal is limited to offering only FPE courses online. All other degree requirements will need to be satisfied elsewhere.

We need **your** help in multiple areas.

- If this proposal is accepted, we'll need to double the number of courses offered each semester, which will require additional faculty. We're seeking a director to help manage the program, teach some courses, assist with initial course development, and oversee the recruitment of students. We'll also need another clinical professor and several adjunct professors.
- This initiative will be self-supporting; hence, its existence will be dependent on student enrollment. Communicating the availability of this option will be important.
- As students won't have access to the variety of hands-on activities conducted by on-campus students, we want to set up a network of mentors who can provide comparable hands-on activities where these students are

located. Activities could include inviting them to accompany a team conducting acceptance tests of fire protection systems, or a P.E. providing oversight of a capstone project.

If you are interested in helping with any of these items, please contact either Arnaud Trouvé (atrouve@umd.edu), or Jim Milke (milke@umd.edu).

Update: Undergraduate Student Recruitment

Our recruitment and outreach team, which is supported via an NFPA donation, is led by Liana Stiegler Orndorff (listiegl@umd.edu) and assisted by the FPE Student Ambassadors. Any Alumni who are involved in recruitment activities should reach out to Liana to receive current department marketing materials, including presentations and activity instructions.

If you know a prospective FPE undergraduate student, please encourage them to attend an FPE information session! We will hold three sessions this fall where you may attend in-person, or virtually. More information, including dates and registration, is available at go.umd.edu/FPEIS. Prospective students may also shadow a student ambassador, which includes attending an FPE class, meeting current students and faculty, and more, depending on interest.

Please reach out to the department at enfp@umd.edu to schedule a visit!



Incoming Chair's Message

It is my pleasure and an honor to serve as the new Chair of the Department of Fire Protection Engineering (FPE). The department has a mission to serve both the practice of fire safety engineering and the science of fire, and I

intend to do my best to respect the history and legacy of the department and fulfill this mission.

Fortunately, I start my new responsibilities under excellent conditions: FPE is in a very good place and plays a prominent role in the fire research community. The department is a collegial and nurturing community of students, faculty, staff and alumni, all bound by a shared passion for fire safety engineering. We are grateful to Jim Milke for the state of the department, for his remarkable accomplishments, for his commitment to teaching and mentoring many students, for his leadership in the field, and in particular since 2011 as chair, for his leadership in bridging the gap between the science and the practice. We wish Dr. Milke well in the next chapter of his life! (And will collectively celebrate his accomplishments during the "Celebrating the Milke Way" dinner set for October 7!)

Due to Dr. Milke's retirement, in addition to new plans and external changes, the department is experiencing several transitions with which we need your help.

There is currently a balance in the department between science and practice - this balance rests in great part through staffing of the department with a mix of "teaching" and "research" professor positions. Dr. Milke will remain involved in the department on a part-time basis, helping us through different teaching and leadership tasks. We have one teaching position through the *Milke Endowed Professorship of Practice in FPE*, now fully funded through an impressive \$3M campaign; this position is currently filled by Ken Isman. Since Ken has announced his intent to retire from the department in Summer 2024, we need your help in finding a replacement. We will also need your help in filling a second, new teaching professor position that Dean Samuel Graham is giving us as part of the plan to create a new online delivery method

for our undergraduate program. I am also excited to share that the department is opening an international search for a junior-level tenure-track professor (research professor) position; the search committee will be chaired by Dr. Stas Stoliarov (more news on this in the coming months). On a related note, while tenure-track professors are responsible for developing the department research activities towards fire science, it is also important that they interact with the fire engineering practice. I am committed to developing a plan to bring the "research" professors to the NFPA and SFPE annual meetings and find ways that promote closer interactions with practitioners.

As mentioned above, FPE has committed to an ambitious plan of developing an online delivery option for our undergraduate B.S. degree program. This plan has the potential to grow the numbers of fire engineers in the field and to provide the department with the national footprint that its unique position in education should provide. Jim and Nicole Hollywood are working hard on preparation plans (please see the article above for additional information).

We need your help in adapting the department's teaching portfolio and research capabilities to new challenges and opportunities. Think about the new challenges: fire safety at the wildland urban interface, fire safety in Li-ion battery systems, fire safety in mass timber buildings, hydrogen safety, etc. Think about the new technologies: Artificial Intelligence, a new generation of fire sensors, unmanned aircraft systems, virtual reality, etc. Meeting these new challenges and reaping the benefits of new technologies for FPE applications will require adaptation in the department as well as strong ties with the practice.

I need your patience and support on these points, and I welcome your thoughts and advice during the transition period. We need your help – I need your help – in all of these efforts. I look forward to working with you to write this new chapter of the FPE Department!

-- Arnaud Trouvé



2023 Distinguished Alumni

The UMD Department of Fire Protection Engineering inducted four new alumni this year (starting from the top left):

- Donald Belles (B.S. 1963)
- Kenneth Bush (B.S. 1976)
- Francisco Joglar (M.S. 1998, Ph.D. 2001)
- Frederick Walker (B.S. 1978)

The **Distinguished Alumni Award** honors FPE Alumni who have made a contribution to the mission and ideals of the department. The deadline for nominations is January 15 of each year; the award(s) will typically be announced at the FPE Alumni Dinner in association with the spring NFPA conference. Awards are considered on an ongoing basis, but may not be awarded in the year the nomination is submitted.

For any related questions, please contact the Nomination Chair, Chris Dubay (cdubay@NFPA.org).

FALL CAREER FAIR

We are excited to announce that the FPE Career Fair will be held on Friday, Nov. 3, 2023.

To provide a more intimate experience for companies and students, there will be a change in the registration process. Space for the event will be available on a *first-come, first-served basis*. Currently, only full and associate members of the FIRE Center may register to attend; open registration will begin on July 24.


If you are *not* a member of the FIRE Center and are interested in learning more, please contact Jim Milke (milke@umd.edu).

The event will be held from 10:30 AM to 4:00 PM in the Kim Engineering Building Rotunda.

For more information, please follow this link:

go.umd.edu/FPEFall2023.

Questions can be directed to Ron Mentzer at rmentze1@umd.edu

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