



An announcement from FPE@UMD
December 2014

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THE DEPARTMENT of
CHEMICAL AND BIOMOLECULAR ENGINEERING
A. JAMES CLARK SCHOOL of ENGINEERING

CHBE DISTINGUISHED LECTURE SERIES



**Dripping, Jetting, Drops and Wetting:
The Magic of Microfluidics**

Tuesday, February 4, 2014
Light refreshments available 11:00 a.m.–11:15 a.m.
Seminar: 11:15 a.m.–12:15 p.m.
Room 1201, Physics Building

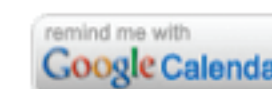
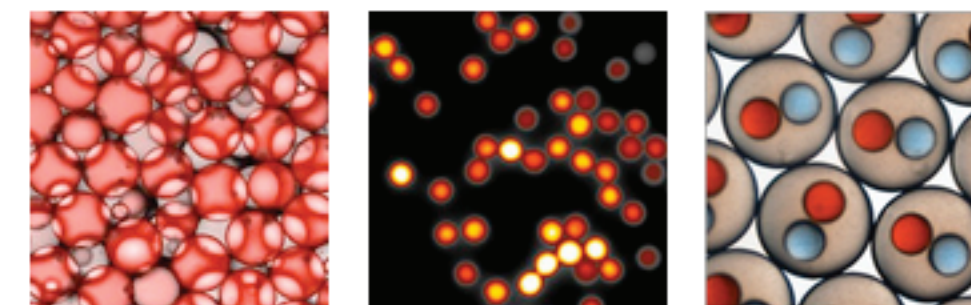
David A. Weitz

*Mallinckrodt Professor of Physics and Applied Physics
Harvard School of Engineering and Applied Sciences*

Dr. David A. Weitz received his Ph.D. from Harvard. He worked at Exxon Research and Engineering as a research physicist for nearly 18 years, and then became a Professor of Physics at the University of Pennsylvania. He moved to Harvard in 1999, and is currently Professor of Physics and Applied Physics. He is also the director of Harvard's Materials Research Science and Engineering Center. His research group focuses on soft matter science, biophysics and biotechnology.
[Learn more »](#)

This talk will discuss the use of microfluidic devices to precisely control the flow and mixing of fluids to make drops, and will explore a variety of uses of these drops. These drops can be used to create new colloid-scale materials that are difficult to synthesize with any other method. These materials have great potential for encapsulation and release and for drug delivery. I will also show how the exquisite control afforded by the microfluidic devices provides enabling technology to use droplets as microreactors to perform biological reactions at remarkably high rates using very small quantities of fluids. I will demonstrate how this can be used for new fundamental and technological applications.

For More Information:
Professor Sheryl Ehrman
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(301) 405-1935



This special seminar is sponsored by the Department of Chemical and Biomolecular Engineering.

www.chbe.umd.edu



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SCHOOL OF ENGINEERING

UNIVERSITY OF MARYLAND / FEARLESS IDEAS

FLASH POINTS

FIRE PROTECTION ENGINEERING



FEATURED PHOTOS: Hands-on experiences in FPE! LEFT: Dan Jimenez from the U.S. Forest Service joined Professor Michael Gollner's [Wildland Fires class](#) to demonstrate wildfire deployment packages, sensors used to collect information in the midst of wildfires. The burning brush-like material and a fan were used to simulate the movement of a fire, in "still" and "windy" conditions. RIGHT: Students in our [Water-based Fire Protection Systems Design class](#) tested one of the fire pumps on the University of Maryland campus. Outside, they created and measured flow. Inside the pump room, Professor Ken Isman and the other half of the class took simultaneous readings on the pressure and speed of the pump while monitoring its activities at the controller.

[FPE NEWS](#)


Message From the Chair

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

Looking back on the fall semester, there were several noteworthy accomplishments. Congratulations to our December 2014 graduates. Keith Williams, President and CEO of Underwriters Laboratories, was the featured speaker at the A. James Clark School of Engineering Commencement Ceremony. There were 8 B.S. graduates, 10 M.S. graduates and 3 M.Eng. graduates.

This fall, Clinical Professor Ken Isman completed his first semester, we participated in the 2nd annual MPact week, Team Mulciber (the wood stove team) continues to receive awards and our research activity continues at a high level. Congratulations are extended to the new honorary member of Salamander, Rodger Reiswig of Tyco Fire Protection Products, inducted in November.

The department had three well attended open houses this fall, and we've initiated development of a special program to introduce high school students to fire protection engineering. This program will be provided in the spring at a local high school, Elizabeth Seton High School. Current Ph.D. student Isaac Leventon, (B.S. '10; M.S. '11) offered his program, "Introduction to Math and Physics through Fire Dynamics" to 10th and 11th grade high school students for the third consecutive term this fall. See fpe.umd.edu/hs-intro for more information.

In This Issue:



First Semester Wrap-Up

Clinical Professor Ken Isman (B.S. '86) has completed his first semester at UMD! We talked to Ken and his students to find out how things went. [More »](#)



Campaign Update: Gifts from Far and Wide!

Chris Giordano (B.S. '83), a recent donor to the campaign, traded his office for a hands-on job keeping U.S. personnel and equipment safe at Bagram Airfield in Afghanistan. [More »](#)

THANK YOU, DONORS! Your gifts help us ensure that we remain at the forefront of our field, cultivate industry-savvy graduates, and conduct applied research. [View our donor list and campaign progress chart »](#)



WIFIRE Wins 3 High Performance Computing Awards

WIFIRE, the wildfire modeling system whose design team includes FPE professors [Michael Gollner](#) and [Arnaud Trouvé](#), received three of [HPCwire's](#) annual Readers' and Editors' Choice Awards at the 2014 International Conference for High Performance Computing, Networking, Storage and Analysis. [Learn more »](#)



Burning Christmas Trees...For Science!

PBS Newshour came to graduate student Isaac Leventon's [Introduction to Math and Physics Through Fire Dynamics](#) program for high school students to find out why Christmas tree fires are so dangerous, and to compare growth rate and peak fire size in natural and artificial trees. [Learn more / Links to TV Coverage »](#)



Myers: One of Maryland's "Innovators of the Year"

Ph.D. student Taylor Myers (B.S. '12 and M.S. '14) was named one of the *Maryland Daily Record's* 2014 [Innovators of the Year](#) for his role in developing Mulciber, a 93% efficient wood-burning stove. [Learn more »](#)

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YOU'RE INVITED!
NO NEED TO RSVP...
SEE YOU THERE!



The Department of
Chemical and Biomolecular
Engineering at the
UNIVERSITY OF MARYLAND
invites you to join us for our

BAGELS AND GRITS BREAKFAST

5

A casual event for our alumni
and friends attending AIChE!

Where: Marriott Marquis, Atrium Level, Room A701
When: Monday, Nov. 17, 7:00-8:30 a.m.



Get all of our latest AIChE news at:
chbe.umd.edu/aiche



We're back and ready for breakfast!

Has it been a year already? Join the University of Maryland's Department of Chemical and Biomolecular Engineering faculty and students at the national meeting of the AIChE in Atlanta for a Maryland-style "Bagels & Grits" breakfast. Catch up with old friends, meet new ones, and learn more about our current research.

We also want to tell you all about our [current open-rank faculty search](#). Candidates holding the rank of full professor will be considered for the inaugural appointment of the Robert Franklin and Frances Riggs Wright Distinguished Chair in Chemical Engineering! **Prospective applicants are welcome at the breakfast.**

No need to RSVP—see you there!

When: Monday, November 17

Where: Room A701, Atrium Level, Marriott Marquis Hotel, Atlanta

Time: 7:00-8:30 a.m.

[Floor plan showing Room A701»](#)

Please visit chbe.umd.edu/aiche to learn where else we'll be at the conference!

If you have questions about the event, please contact us at chbe@umd.edu

We look forward to seeing you!

Best Regards,

Sheryl Ehrman

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THE FISHELL DEPARTMENT *of* BIOENGINEERING

COMING TO BIOE@UMD IN 2016:
A NEW HOME FOR INNOVATION

IMAGINE A PLACE WHERE SKILLED BIOENGINEERS DESIGN AND
BUILD DEVICES THAT BENEFIT HUMANITY...

...where researchers teach students at all levels to perform their own research and create practical solutions to the problems they've been investigating...where engineers from all disciplines work with clinicians to develop life saving technologies...where problems that undermine medical advances are solved...where biological sciences at all length scales are translated into medical practice. The outcome is an increasing number of innovative devices that reach consumers and transform human health.

The **Fischell Department of Bioengineering** at the A. James Clark School of Engineering, University of Maryland is proud to announce that designs for this very place are nearly complete.

Scheduled to open in 2016, our new 6 storey, 160,00 ft² bioengineering building will feature state-of-the-art biofabrication labs, classrooms and meeting space with a common goal: to bring together students, faculty, doctors, entrepreneurs, policy experts, venture capitalists, and regulatory agents to design, build, and commercialize the next generation of health care delivery systems.

The building will also be the home of the **Fischell Institute for Biomedical Devices**, which will support the development of ideas into patented technology and viable startup companies.

The new building's features will include:

- Wet, dry and computational laboratories for research at the intersection of biology and engineered devices
- Dedicated workspace for the translation of innovative concepts into prototype devices or systems, including facilities for fabrication, assembly and packaging



THE A. JAMES CLARK SCHOOL of ENGINEERING, UNIVERSITY OF MARYLAND

The Fischell Department of Bioengineering cordially invites you to attend

THE 2013 FISHELL FESTIVAL

There's still time to register and submit a poster!

Thank you to everyone who has already responded--We look forward to seeing you!

Thursday, October 24, 2013
1:00 p.m. — 6:00 p.m.
Jeong H. Kim Engineering Building
University of Maryland, College Park

[Registration »](#)

You can still register and/or submit a poster through Thursday, October 17.

Your RSVP is appreciated to help us create the best experience for all of our guests.

[Submit a Research Poster »](#)

[Directions and Parking Information »](#)

Please visit fischellfestival.umd.edu for our program and the latest updates!

Times and speakers are subject to change.



The Fischell Festival is now part of the A. James Clark School of Engineering's **Mpack Week**, a series of signature events showcasing the best research from our faculty, students and colleagues. You'll find common themes throughout, such as entrepreneurship, robotics, and fearless ideas for improving millions lives.

[Use the Mpack Week registration form to RSVP for the Fischell Festival and other great events »](#)

Were you unable to attend last year? Miss a lecture? Want to see photos and video? [Visit the 2012 Fischell Festival Recap page »](#)

Questions? Please e-mail us at fischellfestival@umd.edu.



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www.bioe.umd.edu



An invitation from the Department of Fire Protection Engineering, University of Maryland
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UNIVERSITY OF MARYLAND / FEARLESS IDEAS

WHAT IS FIRE PROTECTION ENGINEERING? COME TO AN OPEN HOUSE TO FIND OUT!



[FPE NEWS](#)

Our Fearless Ideas Save Lives

Help Keep the World Safe—Become a Fire Protection Engineer

Fire Protection Engineering (FPE) is the **only** ABET-accredited undergraduate program in the world! FPE students use predictive modeling, innovative building and product design, risk analysis, human behavioral studies and other engineering methods to protect people from fire. The field is experiencing **explosive** growth in the job market and our graduates are eligible for opportunities in exciting careers all over the world.

Attend an Upcoming Open House to Learn More!

We will offer two open houses to choose from during the Spring 2015 semester. Current high school students, undergraduates, community college students, and their families are welcome to attend. Registration is required.

Monday, February 23, 2015 from 3:00-5:00 p.m.
Thursday, March 5, 2015 from 3:00-5:00 p.m.

What Will You Do at Our Open House?

- Watch demonstrations of fire research and take a tour of our labs
- Meet our students and faculty
- Apply for a **\$2000 FPE Departmental Scholarship**
You must attend one of the open house dates above to be eligible. [Learn More »](#)

Sign up early—space is limited! For directions and to register, visit fpe.umd.edu/openhouse.

Questions? E-mail Nicole Hollywood at nholly@umd.edu

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