



Department of Electrical and Computer Engineering

UNIVERSITY OF WISCONSIN-MADISON

news for alumni • spring 2020

From our chair

Dear alumni and friends,

Another academic year has come to a close. This spring semester has been anything but ordinary, though, amid the uncertainty of the global COVID-19 pandemic. Our top priority has been supporting our students, faculty and staff during this time of upheaval. As engineers, our tenacious ingenuity has helped us transition to remote instruction in a very short amount of time, contribute our expertise toward combating the COVID-19 pandemic and continue to advance our research on the frontlines of healthcare innovations, renewal energy solutions and more.



It's been inspiring to witness the engagement of our first-year undergraduate students who have made use of the electronics kits we shipped to their homes to experience firsthand the design and implementation of electronic controllers for a simplified ventilator in our *Introductory Experience in Electrical Engineering*. It's hard to believe that it was only a few months ago that UW-Madison women engineering students—including one of our computer engineering undergrads—were in Uganda as part of a Society of Women Engineers international service trip to promote women's empowerment, teach STEM concepts and conduct volunteer work. I hope you enjoy reading more about these efforts in this newsletter.

All the best,

Susan Hagness

Department chair and Philip Dunham Reed Professor

Big adjustments

In the face of the COVID-19 pandemic, faculty and students got creative to move classes online.

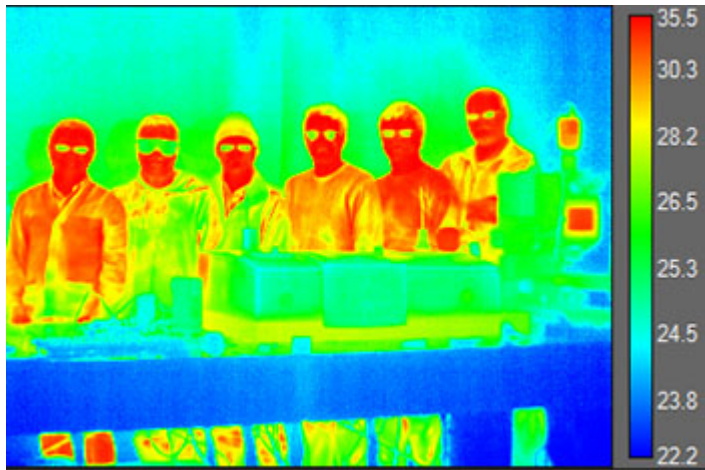
[Read more](#)



Looks cool

A new samarium nickel oxide coating developed by Associate Professor Mikhail Kats and his students does not emit thermal light, even when it's hot.

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Empowering experience

Undergraduate Julia Bennett worked with HIV-positive women in Uganda as part of a Society of Women Engineers trip.

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More headlines

- Assistant Professor [Dominic Gross](#) is researching ways to make renewable energy work better with the current power grid.
- Assistant Professors [Kassem Fawaz](#), [Varun Jog](#) and [Eric Severson](#) have all earned National Science Foundation CAREER Awards.

- Thomas Jahns, Grainger Professor of Power Electronics and Electrical Machines, [received a Hilldale Award](#) from UW-Madison in recognition of his distinguished contributions to research, teaching and service.
- A team led by PhD student Tianen Chen [won the smart healthcare category](#) in Foxconn's Smart Cities-Smart Futures competition with augmented reality glasses designed for healthcare workers.
- Our department is part of a new partnership with the Max Planck Institute for Plasma Physics to develop [a next-generation fusion experiment](#).
- Graduate students Rahul Parhi, Trevor Seets and Tianen Chen have won prestigious [National Science Foundation Graduate Research Fellowships](#).
- Undergraduate Mostafa Hassan received a [2020 Barry Goldwater Scholarship](#).



A system developed by Professor Daniel van der Weide gives surgeons [a better way to locate tumors](#) during breast cancer surgery.



Professor Irena Knezevic's commitment to the undergrad experience earned her a [Chancellor's Distinguished Teaching Award](#).

Alumni news

- Milwaukee-based PROMISS Diagnostics, led by founder and CEO **Jalal Sulaiman** (MS '10) recently raised \$400,000 in seed money from the Wisconsin Alumni Research Foundation and Northwestern Mutual Cream City Venture Capital. The investment will help fund the development of the company's first product, a blood test that can detect ovarian cancer at a very early stage.

- Co-founder and chairman **Subbu Rama** (MS '05) sold his company, Bitfusion, to VMWare, a major tech company, for an undisclosed price. Bitfusion makes virtualization software for accelerated computing. The software distributes workloads across a network's GPUs via a virtual server, allowing them to support intensive applications like machine learning.

Help UW-Madison engineers respond to COVID-19

