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ECE Weekly

The Ohio State University | **Department of Electrical & Computer Engineering**

As Johnson's chair term ends, faculty and staff offer thanks

After a four-year term leading The Ohio State University's Department of Electrical and Computer Engineering (ECE), staff and faculty thanked outgoing chair **Joel Johnson** for his steady guidance. ECE Associate Chair **Betty Lise Anderson** said Johnson worked hard for the department during his term. Newly-appointed chair **Hesham El Gamal** now assumes the role. "The thing about the collegiality of this department, that's one of things I'm most proud of," Anderson said. "It comes from the top." She said the leadership of former chairs **Yuan Zheng**, **Robert Lee** and Johnson fostered this culture. El Gamal said he values this as well. "It is a culture I will work hard to keep," he said.

Read the full story at: https://go.osu.edu/johnson18

Watch a short video of the event: https://go.osu.edu/johnson18vid

El Gamal encourages blockchain cybersecurity

If blockchain technology works for bitcoin, can it work for Ohio? Blockchain is a linked digital record where data cannot be changed without the assent of the entire connected network. Political, business and university leaders held a press conference Aug. 23 to explain the technology and its potential. **Hesham El Gamal**, chair of Ohio State's Department of Electrical and Computer Engineering, attended the hearing to offer encouragement for incorporating the technology, as well as university assistance in its implementation and research. Full story: **http://go.osu.edu/eceblockchain**

Ringel: Distinguished University Professor

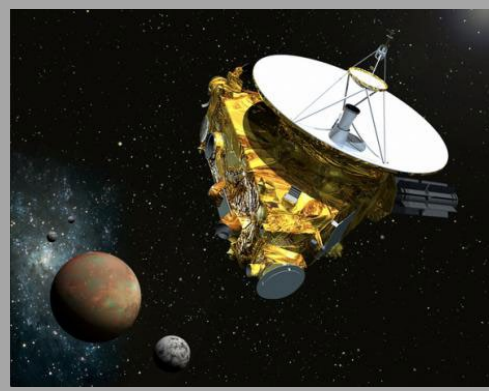
The Ohio State University awarded **Steven Ringel**, a faculty member in ECE, the permanent title of Distinguished University Professor in appreciation of his teaching, research and service to date. Ohio State confirmed the honor to only 58 awardees in its history.
Read the full story: **https://go.osu.edu/ringeldup**

Watch a video recap of the event:
https://go.osu.edu/brainhack18

Recap: Brain Health Hack 2018

At the root of treating societal issues such as addiction, Alzheimer's disease, epilepsy, or even traumatic brain injury, is the need to understand how the human mind functions. Scientists at The Ohio State University are teaming up to find more ways to learn how technology and engineering can help accomplish this goal. In 2018, the university launched its first Brain Health Hack to explore new realms of treatment. ECE faculty were on board as mentors.
Full story: **https://go.osu.edu/bhack18**

New Horizons wakes up for its next historic journey deeper into outer space



When NASA's New Horizons spacecraft photographed the closest photos of Pluto in history, technology from Ohio State helped make it possible
After this stunning science performance in July 2015, New Horizons went into communication hibernation. On June 5, however, the mission operations team at Johns Hopkins Applied Physics Laboratory received confirmation, through NASA's Deep Space Network, that the spacecraft had exited hibernation, as it was programmed to do.
Read more about the spacecraft and how it will begin preparations for an encounter with the farthest planetary boundaries in world history. Read the full story: **http://go.osu.edu/NH**

Read past editions of ECE Weekly online:
http://go.osu.edu/ewn

Blauert wins IEEE research award for implantable antenna design

This summer, grad student **Jack Blauert** received the IEEE Antennas and Propagation Society Doctoral Research Award, which included a $2,500 scholarship.
Working under the leadership of ECE Assistant Professor **Asimina Kiourti**, Blauert won the award for his work, "Wireless and Batteryless In-Situ Bioimpedance Sensors."
Story:
http://go.osu.edu/blauertieee

The Science of Smiles

Scientists know smiles are easier to recognize than other facial expressions. What they don't know is why.
ECE Professor **Aleix Martinez** was recently featured in The Guardian Life and Style Section, explaining his work and experience in the collection of facial recognition data.
Scientists, such as Martinez, theorize how smiles – as well as frowns and other facial expressions – are remnants of humanity's distant pre-linguistic heritage. Read more about the research and how language really did start with a smile.

Story: **http://go.osu.edu/amsmiles**

Faculty Spotlight: Tawfiq Musah

Recently joining the ECE team as an assistant professor, **Tawfiq Musah** found his path toward engineering in the most unlikely place - inside an aluminum pot. Growing up in an artisan community in the Republic of Ghana, West Africa, Musah learned how to make kitchen wares: designing molds using clay, smelting and pouring aluminum to create handmade cooking pots and utensils. Today, Musah has turned his love for creation into making digital designs.
Read more about Musah, his goals at Ohio State, and his research in redesigning more efficient analog to digital converters to make them specific to certain communication links.
Full story: **http://go.osu.edu/musah**

Ohio State engineers creating a more efficient insulin pump

Diabetes is a complicated condition requiring medical devices and a multitude of medications for patients. Keeping up with the treatment is often a burden unto itself. A team in the Ohio State ECE department is doing its part to make treatment of Type One diabetes a lot more simple. They proposed a new kind of insulin pump, a device improving upon others currently in the market. Not only is it powered wirelessly, but it is much smaller in size. In collaboration with Cornell University; the Buckeyes on the team include ECE assistant professors **Liang Guo** and **Asimina Kiourti**, Internal Medicine Assistant Professor **Kathleen Dungan**, along with recent Ph.D. graduate **Brock DeLong** and current Ph.D. student and Graduate Research Associate **Bingxi Yan**.
Read the full story: **http://go.osu.edu/insulin**