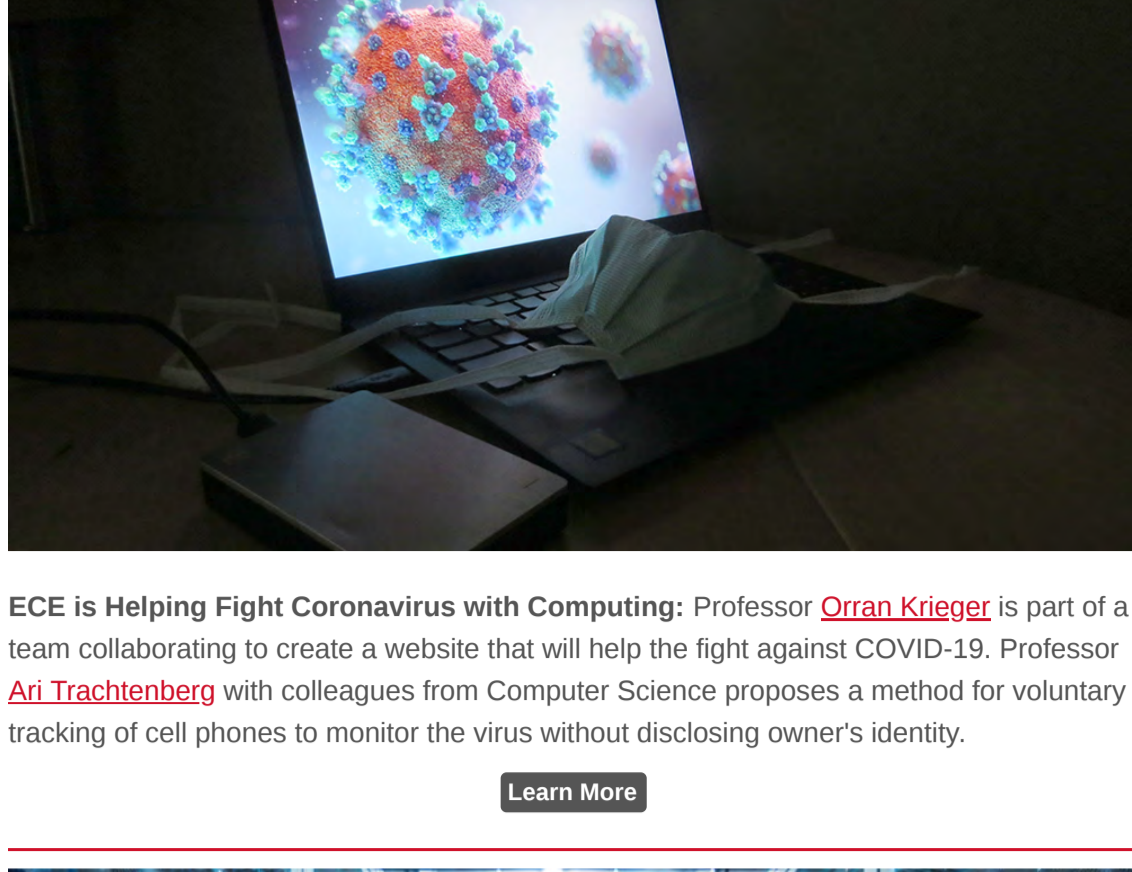


# ECE 2020 SPRING NEWSLETTER



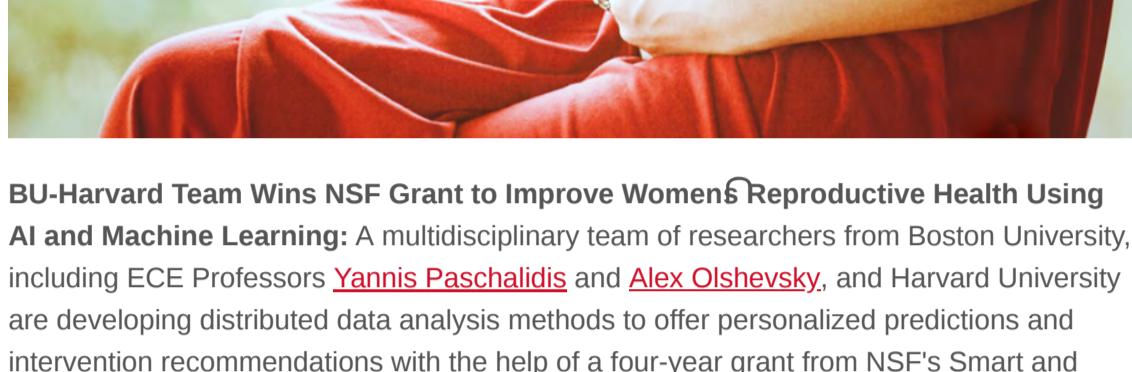
**ECE is Helping Fight Coronavirus with Computing:** Professor [Orran Krieger](#) is part of a team collaborating to create a website that will help the fight against COVID-19. Professor [Ari Trachtenberg](#) with colleagues from Computer Science proposes a method for voluntary tracking of cell phones to monitor the virus without disclosing owner's identity.

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**ECE Professors Receive NSF Funding to Develop New Computing Testbed:** Professors [Orran Krieger](#) and [Martin Herbordt](#) are among a team of researchers that will construct and support a testbed for research and development of new cloud computing platforms thanks to a grant from the National Science Foundation.

[Learn More](#)



**BU-Harvard Team Wins NSF Grant to Improve Women's Reproductive Health Using AI and Machine Learning:** A multidisciplinary team of researchers from Boston University, including ECE Professors [Yannis Paschalidis](#) and [Alex Olshevsky](#), and Harvard University are developing distributed data analysis methods to offer personalized predictions and intervention recommendations with the help of a four-year grant from NSF's Smart and Connected Health program.

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**A New Class of Random Lasers:** Professor [Luca Dal Negro](#) and his collaborators Yuyao Chen (ECE) and Alfredo Fiorentino (Catania University, Italy) introduced a new type of random lasers leveraging structural correlations in random media to improve their lasing performance. Their article has appeared in the journal *Scientific Reports*.

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**Twisting Light; A Faster Way Forward for Fiber Optics:** Fiber optics technology has revolutionized data communications. Now, Professor [Siddharth Ramachandran](#) and his team have discovered a new method, and along with it, a new fiber, that can transmit 24 times the amount of data of any previous single optical fiber. Their work has been published in *Nature Communications*.

[Learn More](#)



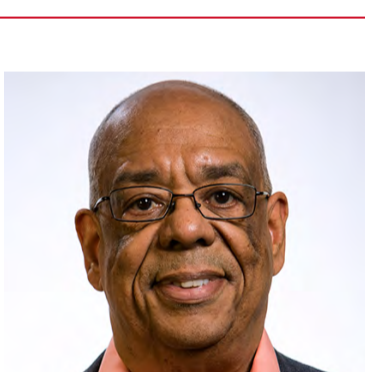
**New Infrared Technology Could Change the Future of Pathology:** In a paper published by *Light Science & Applications*, Professor [Ji-Xin Cheng](#) and his research partners leverage infrared technology to tell which molecule is affected during phase-contrast microscopy. Now phase contrast can be used for precise diagnosis of human diseases on a molecular level.

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**ECE Junior Austin Negron Wins HackHarvard Hackathon:** Austin Negron (right), with the help of his peer, Rishab Nayak (left), and two Northeastern students, developed an app that can take down the language barrier for non-native English speakers when filling out online forms.

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**Giles Elected AAAS Fellow:** Professor [Roscoe Giles](#) has been elected a Fellow of the American Association for Advancement of Science (AAAS) for his leadership and major contributions to increasing the participation of underrepresented groups in computing disciplines, particularly via leadership in curricula and organizations that advance inclusion.

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**Goyal Elected OSA Fellow:** The Optical Society names Professor [Vivek Goyal](#) a Fellow for outstanding inventions in computational imaging and sensing, including unprecedented demonstrations of the utility of weak, mixed, and indirect optical measurements."



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**Cheng Receives 2020 Pittsburg Spectroscopy Award:** Professor [Ji-Xin Cheng](#) pursued a 30-year-long career in the field of spectroscopy because he's "always wanted to study areas in science that seem impossible and to push the boundaries and discover something new. For making such a unique impact in the field he received the Pittsburg Spectroscopy Award.

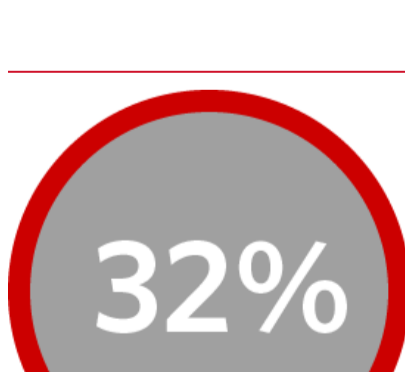


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**Sander Elected to IEEE Photonics Society's Board of Governors:** Assistant Professor [Michelle Sander](#) was elected to a three-year term serving on the Board of Governors for the IEEE Photonics Society. She joins the Board together with three other new worldwide-elected members.

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**32% OF ECE BACHELOR'S DEGREES AT BU WERE AWARDED TO WOMEN IN 2018/19 COMPARED TO NATIONAL AVERAGE OF 14%**  
*Most recent data from ASEE*



**3RD HIGHEST IN PERCENTAGE OF DOCTORAL DEGREES AWARDED TO WOMEN IN ENGINEERING**  
*Most recent data from ASEE*

## Distinguished Faculty

- 3 National Academy Members
- 3 Current/Former IEEE Society Presidents
- 34 Society Fellows
- 27 NSF, DOE and DOD Early Career Awards
- 32 Average H-Index per Faculty
- 5,400 Average Number of Citations per Faculty
- 54 Tenure-Track Faculty

### RESEARCH FUNDING



[f](#) [t](#) [in](#)