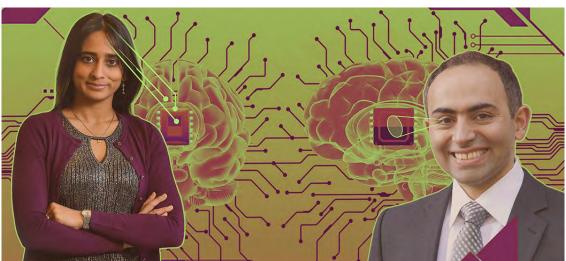


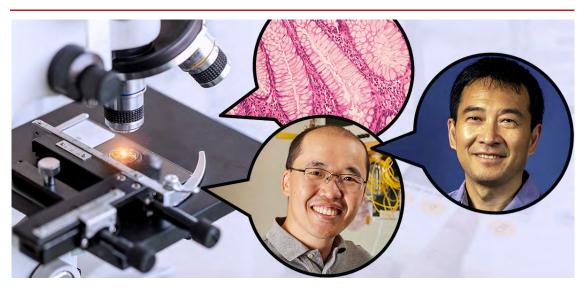
ECE 2023 SPRING NEWSLETTER





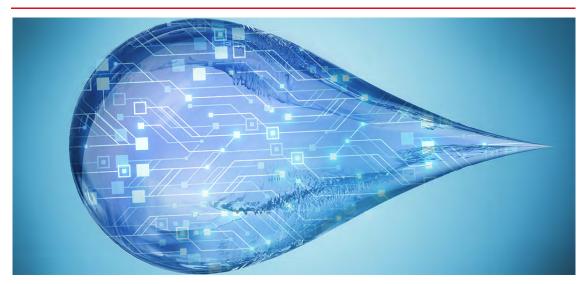
The Brain Trust's Newest Additions: If there's one thing that newly-minted ECE Professors <u>Archana Venkataraman</u> and <u>Kayhan Batmanghelich</u> have in common, it's a passion for putting their computational expertise in areas such as algorithmic data analysis, signal processing, and network theory to bear on improved applications for healthcare.

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ECE Faculty Receive \$1M Each from Chan Zuckerberg Foundation: Already pioneers in the field, Professors <u>Ji-Xin Cheng</u> and <u>Lei Tian</u> will push the boundaries of dynamic imaging and computational microscopy for medical research further than ever before, thanks to this generous support.

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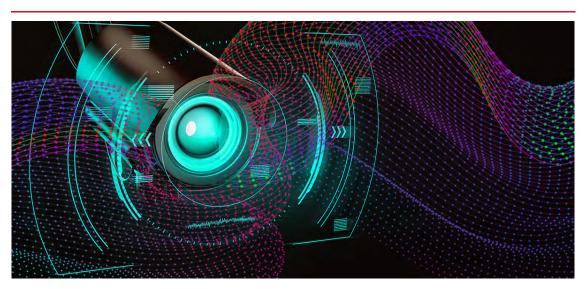
Building the BioComputing Future: With support from a \$1.4M NSF grant, Professors <u>Douglas Densmore</u> and <u>Samuel Oliveira</u> are teaming up with researchers from UMass Amherst on an ambitious effort to program bacterial colonies into "living circuits" for detecting & neutralizing drinking water contaminants and leveraging the automation of high-throughput microfluidic devices through Densmore's DAMP Lab.

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Going the Distance at ISSCC 2023: In hardware and microelectronics circles, the International Solid-State Circuits Conference is the most competitive game in town, nicknamed the "Chip Olympics." In those terms, it could be said that <u>Professor Rabia</u> <u>Yazicigil</u> and her students brought home a pile of medals.

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Pushing the Boundaries of Photonic Sensing: <u>Professor Luca Dal Negro</u> has received a \$450K grant from the Army Research Office to pursue improvements in quantum photonic sensing and detection technology driven by the development of novel nonlinear nanostructures.

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If The Truth Is Out There ... He Just Might Find It: Despite popular images of flying saucers crashing through trees or little ETs turning up Earthside, one of the challenges with UFOs—now officially called unidentified aerial phenomena, or UAP —is that we can't clearly see the objects in question and haven't been able to properly study them. Professor Joshua Semeter has joined a NASA project aimed at improving our approach.



STUDENT HIGHLIGHTS



One Drop at a Time: BU's 2022 student team, sponsored by <u>Professor Douglas</u> <u>Densmore</u> and <u>STEM Pathways</u>. made a splash at the <u>International Genetically</u>

<u>Engineered Machine (iGEM) competition</u> with the development of a novel technology to streamline the water testing process. Their creation, which combined custom-designed software and modular hardware, earned a gold medal and a nomination for the Best Environment Project.





Intercollegiate Student Supercomputing Team Sets Benchmark Record: on the tenth anniversary of their participation in the <u>Student Cluster Competition</u> at SC22, the annual supercomputing conference, the Massachusetts Green Team was ready to make their mark once again - winning the interview portion of the competition and setting a benchmark record.

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FACULTY HIGHLIGHTS



Metcalf Chair, DeLisi Lecturer: Everything's coming up Boas. On the heels of his recent appointment as Boston University's prestigious Arthur G. B. Metcalf Chair, recognizing an internationally known scholar in mathematics, science, or engineering, <u>Professor David Boas</u> is being honored with the College of Engineering's 2023 Charles DeLisi Award and Lecture.

Visionary, Recognized: The Department of Electrical and Computer Engineering congratulates <u>Professor Vivek Goyal</u> on his appointment as a <u>2022 Fellow of the American</u> <u>Association for the Advancement of Science (AAAS)</u>; a prestigious honor, and richly deserved.





Innovation On (Her) Mind: In recognition of her pioneering work in non-genetic neuromodulation, <u>Professor Chen Yang</u> has been inducted to the <u>American Institute for Medical and Biological</u> <u>Engineering (AIMBE)'s 2023 Class of Fellows;</u> placing her among the top 2% of medical and biological engineers around the world.

Extraordinary Control: <u>Ioannis Paschalidis</u>, Distinguished Professor of Engineering, has been elected a <u>Fellow of the International Federation of</u> <u>Automatic Control (IFAC)</u>, in recognition of his work on control of network systems, optimization, and robust learning.





Count Her In: Karen Panetta (ENG'85) has dedicated her professional life to engineering for positive impact, and advancing opportunities for women in STEM. Panetta, now a Professor of Electrical and Computer Engineering and Dean of Graduate Education at the Tufts University School of Engineering, has been elected to the National Academy of Engineering (NAE), one of the highest distinctions in engineering "for leadership empowering females in STEM, and for contributions to computer vision and simulation algorithms."

