

ECE 2025 SPRING NEWSLETTER

SAVE
THE DATE

ECE DAY 2025

Friday, May 2

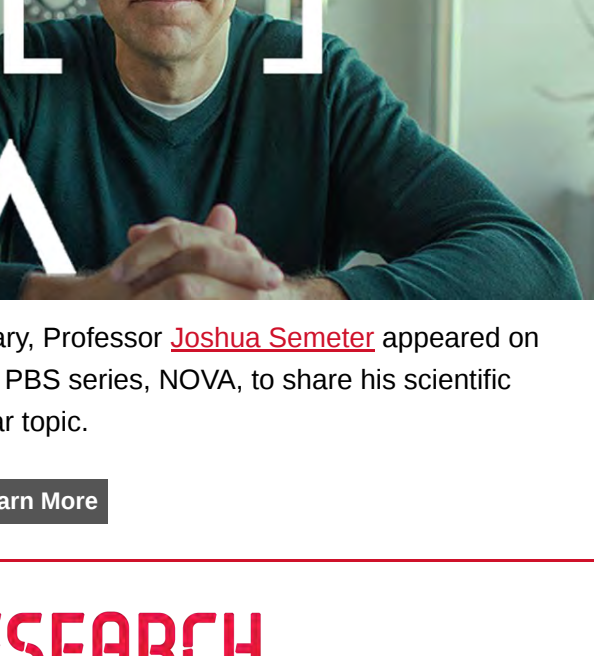


IN THE MEDIA

DIRECTOR, CENTER FOR SPACE PHYSICS
EXPERT NASA PANELIST

WHAT ARE UFOS?
LEARN WHAT
THE SCIENCE
SAYS

NOVA




Taking the "U" Out of "UFO:." In January, Professor [Joshua Semeter](#) appeared on a new one-hour special from the classic PBS series, NOVA, to share his scientific perspective on an astronomically popular topic.

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RESEARCH



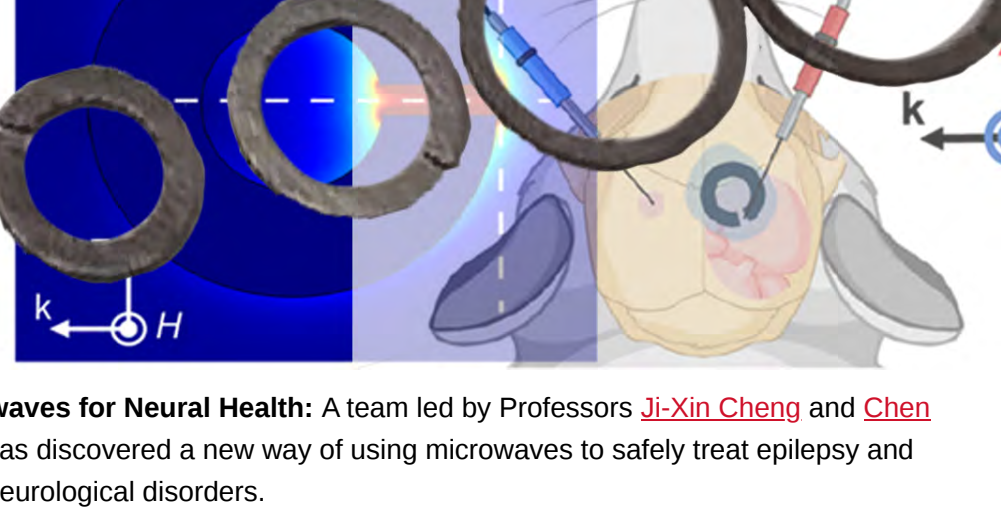
Rapid Detection on a Chip: An optical biosensor developed by Professor [Selim Ünlü](#) and collaborators diagnoses monkeypox in record time.

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Max

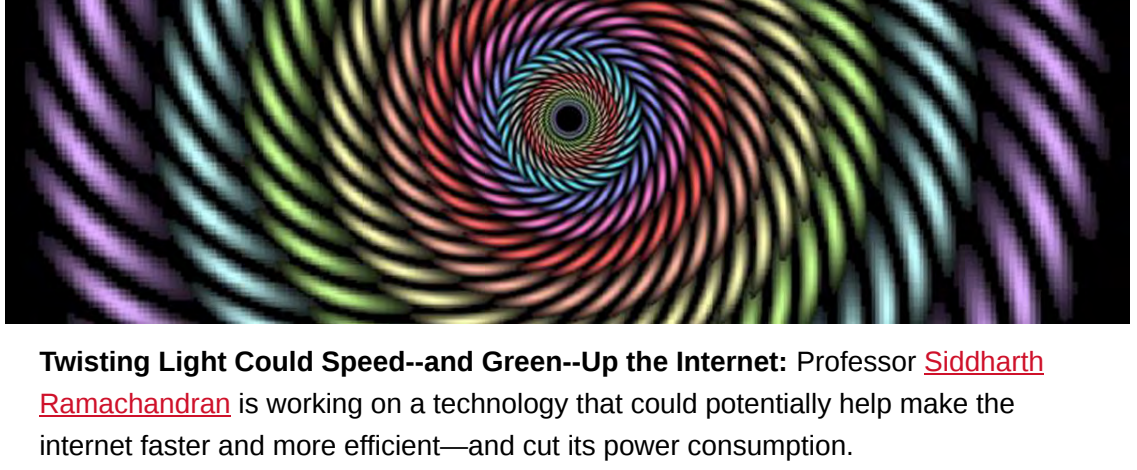
Min

RFU amplitude



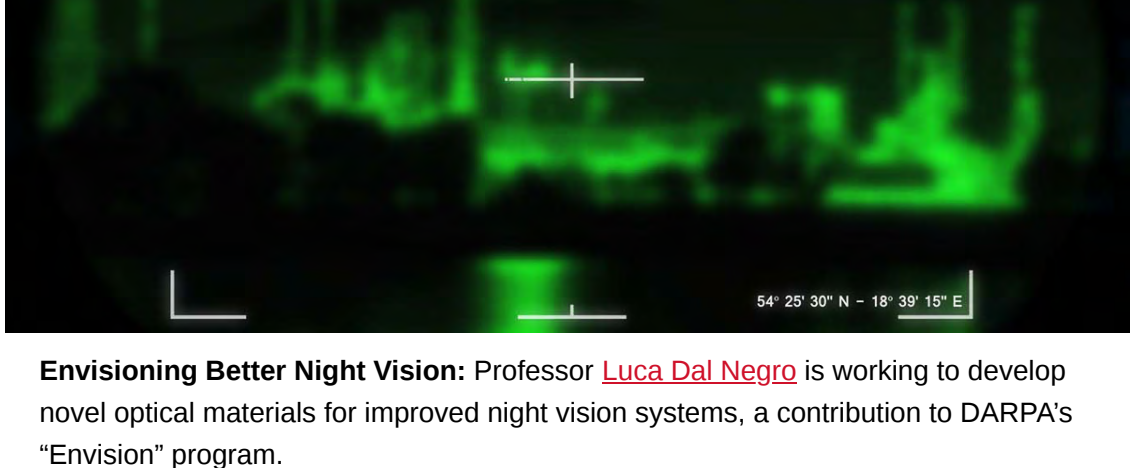
Microwaves for Neural Health: A team led by Professors [Ji-Xin Cheng](#) and [Chen Yang](#) has discovered a new way of using microwaves to safely treat epilepsy and other neurological disorders.

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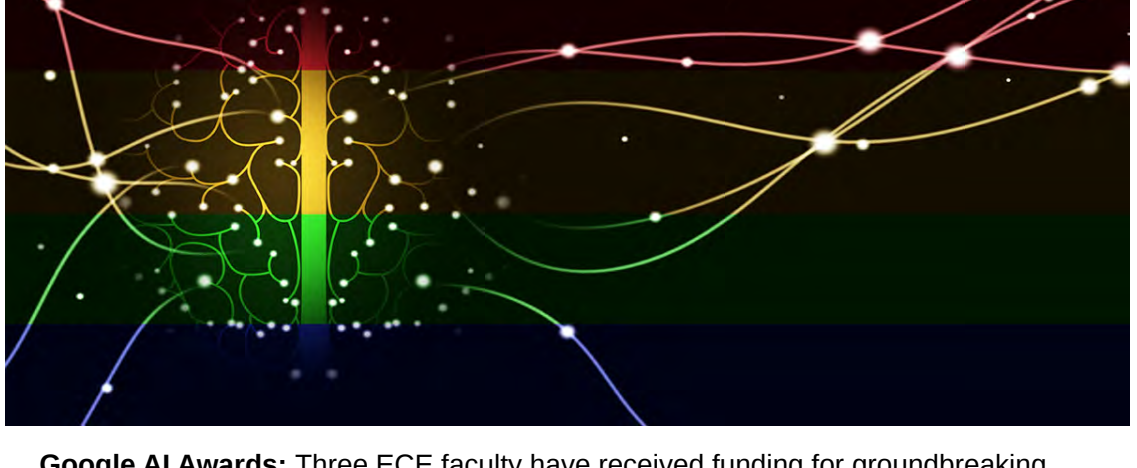
Twisting Light Could Speed--and Green--Up the Internet: Professor [Siddharth Ramachandran](#) is working on a technology that could potentially help make the internet faster and more efficient—and cut its power consumption.

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Envisioning Better Night Vision: Professor [Luca Dal Negro](#) is working to develop novel optical materials for improved night vision systems, a contribution to DARPA's "Envision" program.

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Google AI Awards: Three ECE faculty have received funding for groundbreaking new AI-centric projects; Professor [Kayhan Batmanghelich](#) is working to address bias in breast cancer risk prediction models, while Professors [Ayse Coskun](#) and [Gianluca Stringhini](#) are developing improvements to resilience, efficiency, and security in complex large-scale systems.

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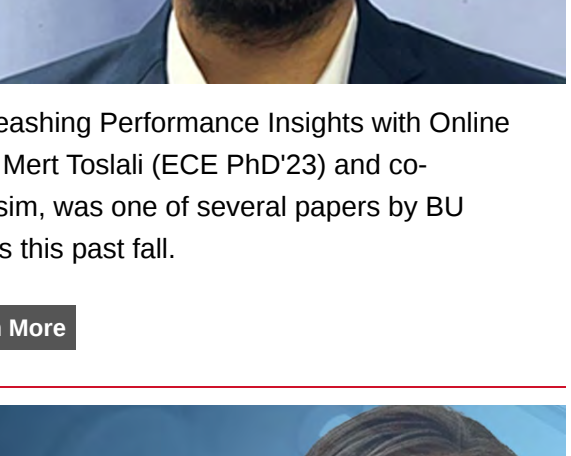
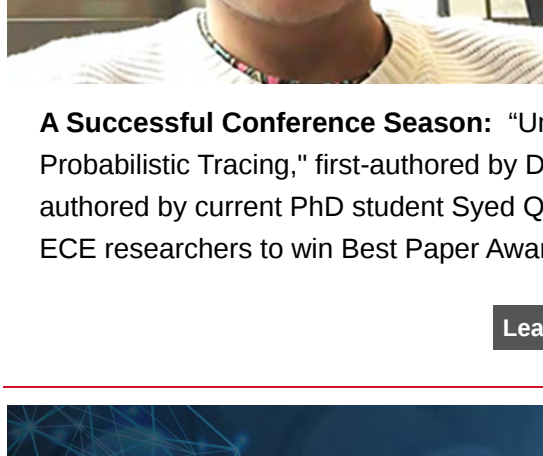
ACHIEVEMENTS



- Presidential Honors**
Professor [Michelle Sander](#) is the recipient of a 2025 Presidential Early Career Award for Scientists and Engineers (PECASE), the United States government's highest honor for researchers early in their careers.
- Eye-Opening Contributions**
Professors Michelle Sander and Lei Tian have been elected to Optica's 2025 class of Fellows, for their sterling contributions in ultrafast fiber lasers and computational imaging, respectively.
- Serving His Field**
Professor W. Clem Karl, Chair of the Department of Electrical and Computer Engineering, has been elected to serve as IEEE's 2025 Vice President of Publication Services and Products.
- Taking the Reins**
Distinguished Professor of Engineering [Siddharth Ramachandran](#) has assumed the role of Editor-in-Chief of *Optics Express*, one of the premiere peer-reviewed journals in the field of Optics and Photonics.




STUDENTS & ALUMNI



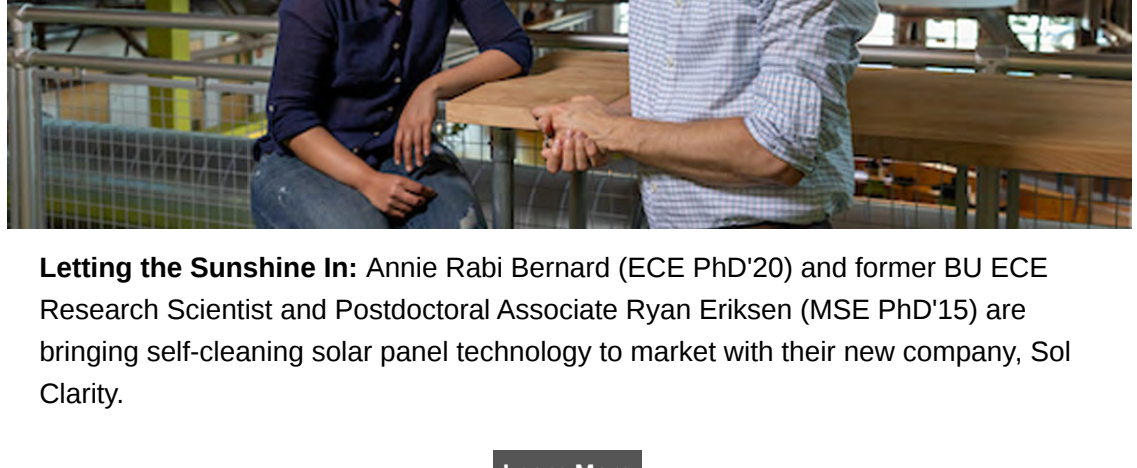
A Successful Conference Season: "Unleashing Performance Insights with Online Probabilistic Tracing," first-authored by Dr. Mert Toslali (ECE PhD'23) and co-authored by current PhD student Syed Qasim, was one of several papers by BU ECE researchers to win Best Paper Awards this past fall.

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Analog Neural Networks: In a new paper published by *Nature Communications*, first-authored by alum Dr. Cansu Demirkiran (ECE PhD'24), researchers lay out an eponymous "blueprint for precise and fault-tolerant analog neural networks."

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Letting the Sunshine In: Annie Rabi Bernard (ECE PhD'20) and former BU ECE Research Scientist and Postdoctoral Associate Ryan Eriksen (MSE PhD'15) are bringing self-cleaning solar panel technology to market with their new company, Sol Clarity.

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AT A GLANCE

Distinguished Faculty

4 National Academy Members

3 Current/Former IEEE Society Presidents

7 Current/Former Editors-in-Chief

50 Society Fellows

32 NSF, DOE and DOD Early Career Awards

42 Average H-Index per Faculty

9,500 Average Number of Citations per Faculty

51 Tenure-Track Faculty

