

# ECE 2025 SPRING NEWSLETTER

**SAVE THE DATE**

**ECE DAY 2025**  
Friday, May 2



## IN THE MEDIA



**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



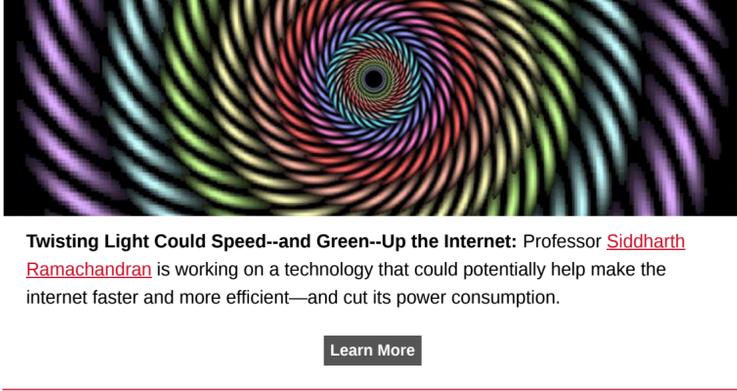
**Rapid Detection on a Chip:** An optical biosensor developed by Professor [Selim Ünlü](#) and collaborators diagnoses monkeypox in record time.

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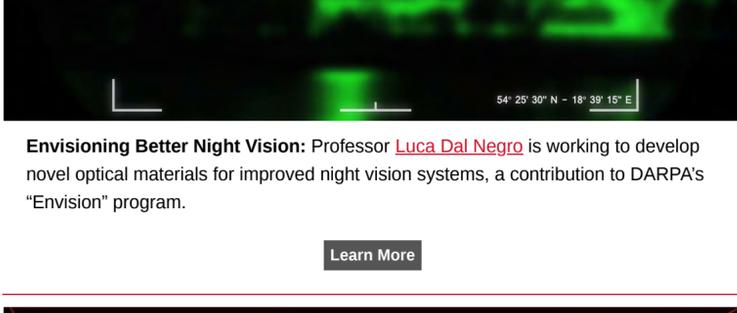
**Microwaves for Neural Health:** A team led by Professors [Ji-Xin Cheng](#) and [Chen Yang](#) has discovered a new way of using microwaves to safely treat epilepsy and other neurological disorders.

[Learn More](#)



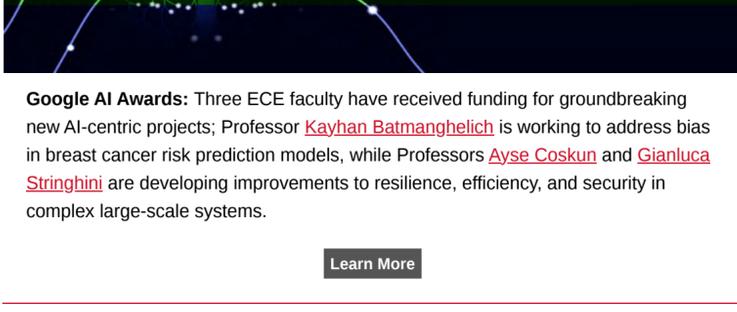
**Twisting Light Could Speed--and Green--Up the Internet:** Professor [Siddharth Ramachandran](#) is working on a technology that could potentially help make the internet faster and more efficient—and cut its power consumption.

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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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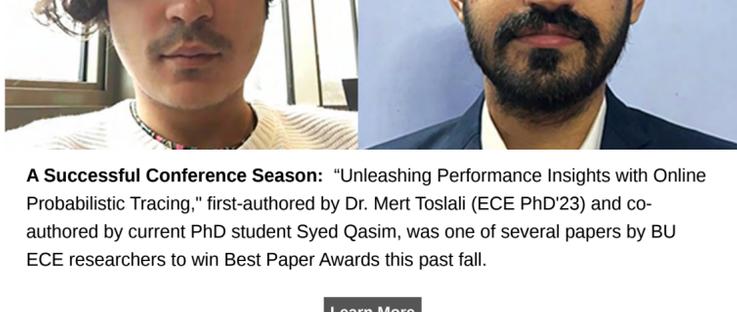
## ACHIEVEMENTS



- 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



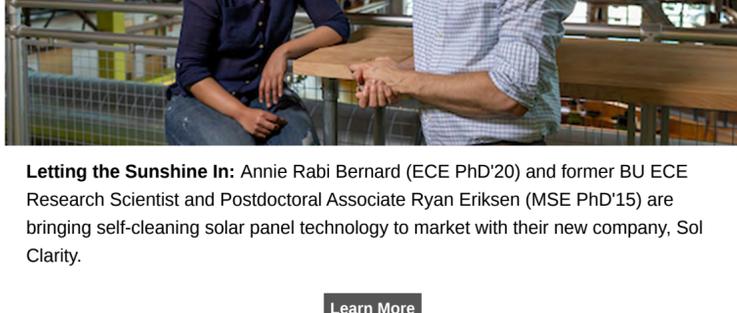
**A Successful Conference Season:** "Unleashing Performance Insights with Online Probabilistic Tracing," first-authored by Dr. [Mert Toslali](#) (ECE PhD'23) and co-authored by current PhD student [Syed Qasim](#), was one of several papers by BU ECE researchers to win Best Paper Awards this past fall.

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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

### RESEARCH FUNDING



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Upcoming BU ECE Events

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