

2024 Spring

EE NEWS INSIGHTS



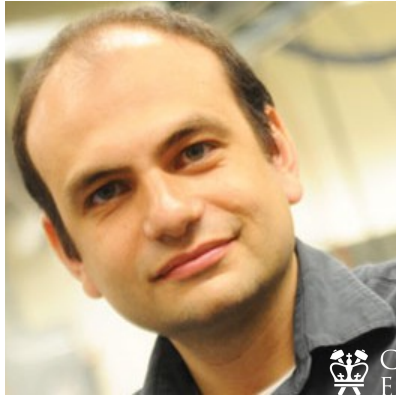
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Foreword



Dear EE/CE Community,

The last year has been an exciting time for our department, and I'm very happy to share our latest newsletter, with updates on research progress, commercialization, and a range of awards for our faculty, students, and alumni. We also have a feature on a teaching innovation our department is very proud of - our [VLSI Design Lab](#), led by Prof. Peter Kinget, in which students design, tape-out, and test an IC from scratch using leading edge tools and processes.

In this year we have also been fortunate to add a new faculty hire - [Prof. Micah Goldblum](#) - to the department in the machine learning area, and his research is also highlighted as a news item below.

Please don't hesitate to reach out if you have any questions, are an alum with news we can share, or if you see any opportunities for collaboration.

Warm regards,

Ioannis (John) Kymissis

Kenneth Brayer Professor and Chair
Columbia University Department of Electrical Engineering



Overview

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Faculty News



Prof. Javad Ghaderi and Student Christos Tsanikidis Win the Best Paper at IEEE INFOCOM 2024

Professor Javad Ghaderi and his PhD student Christos Tsanikidis receive the prestigious Best Paper Award at IEEE INFOCOM 2024.



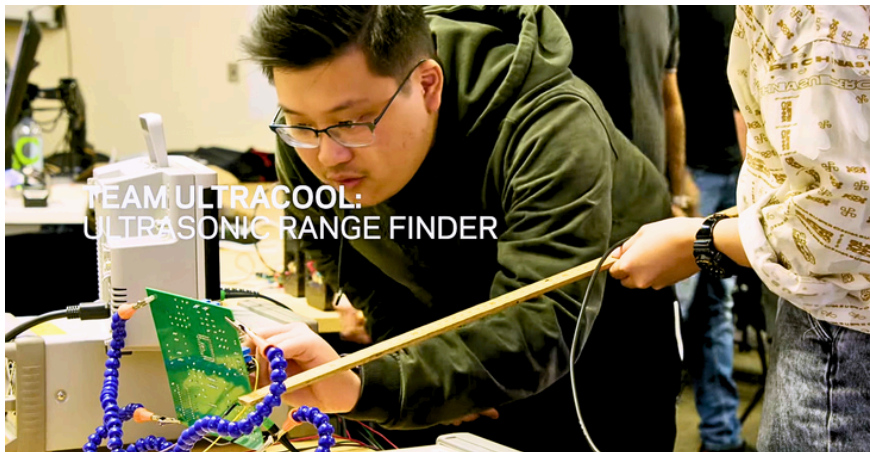
Prof. Asaf Cidon and Junfeng Yang Win the Best Paper Award at CIDR 2024

Columbia engineers were awarded for their research paper on Chablis, a geo-distributed multi-version transactional key-value store.



EE Welcomes New Faculty Member Micah Goldblum

Please join us in welcoming Prof. Micah Goldblum to the Columbia University EE department.



Research & Impact



01

COSMOS Joins Consortium to Advance Flexibility and Innovation in the Deployment of Wireless Technologies

As the wireless revolution continues to deliver higher networking speeds, more consistent connections, and increased capacity, the need for seamless integration of wireless technologies couldn't be greater.



02

Manufacturing Challenges of MicroLEDs and Their Potential Applications in the Industry

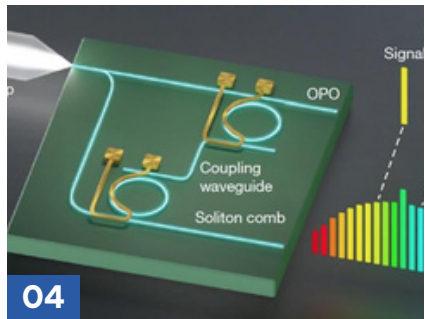
EE Prof. [Ioannis Kymissis](#) and his students Vikrant Kumar, Keith Behrman were featured on the cover of the Physics Today for their research about the manufacturing challenges of microLEDs.



03

Build a Chip, Industry Ready: Explore VLSI Design Lab with Prof. Peter Kinget

Most chip design classes only involve computer simulations. This Columbia Engineering class is different. Watch why.



04

High-Quality Microwave Signals Generated From Tiny Photonic Chip

Researchers create a compact, all-optical device with the lowest microwave noise ever achieved for an integrated chip.

Experts In Media



[Meet the Disney Imagineer Building You a Real-Life Holodeck](#)

Wired Magazine

EE Alum [Lanny Smoot](#) (BS'77, MS'78)
2024 Engineering School Class Day Speaker



[This Clever Radiator Hack Can Make Your Heating System More Efficient](#)

Fast Company

Professor of Electrical Engineering [John Kymissis](#)



[Self-Destructing Circuits and More Security Schemes](#)

IEEE Spectrum

Professor of Electrical Engineering [Mingoo Seok](#)

Students & Alumni

01



Pioneer the Future with EE's Celebrity Clubs

Explore how Columbia University's Engineering clubs are shaping the future of technology and community through innovative projects and passionate leadership.

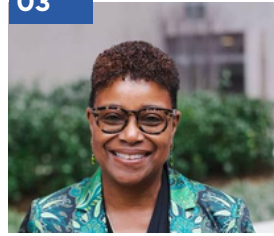
02



Students Win 2024 NSF Graduate Research Fellowship

Four Columbia EE students have been awarded the prestigious [2024 National Science Foundation \(NSF\) Graduate Research Fellowship Program \(GRFP\)](#).

03



A Technical Leader and Social Pioneer

Daneen Cooper (BSEE'80) overcame enormous challenges to lead IT at a Fortune 100 company — and to make it easier for those who followed.

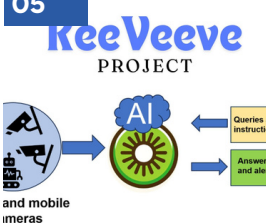
04



EE Alum Wins NSF Award for Breakthrough in Real-Time In- Body Monitoring Technology

EE alum Rabia Tugce Yazicigil (PhD EE '16) and her lab awarded an NSF award on Cyber-Secure Biological Systems.

05



EE Students Win CS3 Accelerator Award for Innovative Security Solutions

Ph.D. students [Mahshid Ghasemi](#) (advised by Prof. Gil Zussman and Prof. Javad Ghaderi) and Jeremy Allen Johnston (advised by Prof. Xiaodong Wang) have been awarded CS3 Accelerator program top honors at the [CS3 Innovation Summit](#).

06



PhD Student Kevin Hermstein Wins 2024 NDSEG Fellowship Award

Kevin Hermstein, a first-year EE MS/PhD student in the [Wireless and Mobile Networking Lab](#), led by Prof. [Gil Zussman](#), has won a 2024 National Defense Science and Engineering Graduate ([NDSEG](#)) Fellowship award.

Event Recap



Driving the Future of Energy and Transportation

Climate change is pushing two pillars of our society — the electrical grid and the transportation system — to undergo significant changes very quickly.

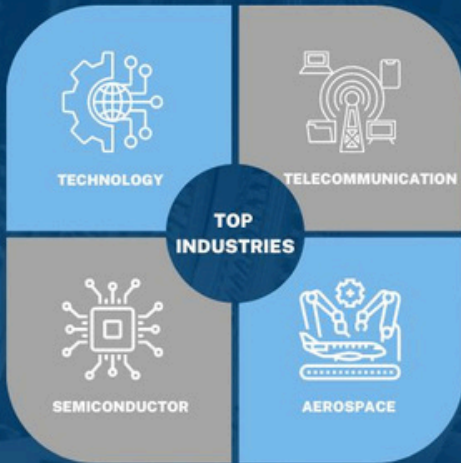
“Innovation in this space is urgently needed to help societies accomplish our goals for energy transition and sustainability,” said Shih-Fu Chang, Dean of Columbia Engineering, in his opening remarks at the Columbia Forum on Smart Electric Energy and Transportation.

The event, now in its third year, brought leading experts in smart energy and transportation electrification to Morningside Heights on Feb. 23.

Read more [here](#).

EE Grads Career Trends

EE GRADUATES CAREER TRENDS



TOP EMPLOYERS FOR GRADUATES

Amazon, Ambarella, Analog Devices, Apple, Cadence, Google, Huawei, Intel, Kodiak Robotics, Marvell, Meta, MIT Lincoln Lab, NVIDIA, Qualcomm, Tau Motors, Telsa, Silicon Labs, TSMC, etc.

WE WANT TO HEAR FROM YOU!

If you're hiring for Internship/Full Time Roles, please reach out to **Jennifer Lee**, Director of [Career Placement](#) at ee-career@ee.columbia.edu
Looking to engage/mentor our talented EE/CE students? - Click [here](#).

We also invite faculty members, alumni, and PhD students to share your career highlights, such as awards, pivotal career insights or updates, and research studies. We are also looking for op-eds and takes on current trends or topics in the industry, or any inspiring story you wish to share about your journey as an EE alum. Send your news tips to **Tina Wang**, External Relations Manager at ee-news@ee.columbia.edu



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Innovating for a Smarter Future, Shaping Engineering Leaders

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