

# CONNECTIONS

LATEST NEWS AND UPDATES FROM  
SEMICONDUCTOR RESEARCH CORPORATION



Source: Andro News

## ICYMI! MediaTek Joins SRC

Big news! Earlier this month, we announced that communications titan MediaTek has joined the SRC Research Consortium as our newest member. "MediaTek is the world leader in smartphone chipset sales and helping to usher in the next era of computing and communications," said Todd Younkin, SRC President and CEO. "MediaTek's participation in the consortium will expand the breadth and depth of SRC's collaborative research programs, driving innovation and opportunity." The company joins eight of the top 10 semiconductor companies as SRC Members, signaling a consistent trend of industry leaders partnering to invest in research that defines the future technology of the semiconductor industry. Welcome!

READ ON FOR MORE  
NEWS AND UPDATES!

[Khare Named AAEOY - 2](#)

[Best Paper Awards - 2](#)

[Faculty Highlights and  
Fellowship News - 3-4](#)

[Upcoming Events - 4](#)

[Top 5 SRC Publications Viewed  
Across All Programs - 4](#)

## Mukesh Khare Receives Prestigious AAEOY Award

Many congratulations to our IBM Board Member Mukesh Khare on being named Asian American Executive of the Year! Mukesh is Vice President of Hybrid Cloud at IBM Research where he leads a team of more than 1,000 researchers developing next-generation cloud solutions in Artificial Intelligence, Machine Learning, and High Performance Computing. Throughout his career, Mukesh has built research alliances in the semiconductor industry to continually drive forward technology innovation through partnership and collaboration. [Read the citation.](#)

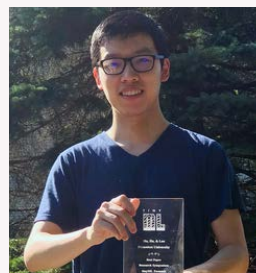


## Best Paper Awards at ALD/ALE 2021



Two SRC Research Scholars took high honors at the 21st International Conference on Atomic Layer Deposition (ALD) and Atomic Layer Etching (ALE). North Carolina State University's [Siyao Wang](#) won the ALD Best Student Paper Award for "Insight into Film Growth Mechanisms in Polyurea Molecular Layer Deposition (MLD) Using New and Combined Precursors." UCLA's [Xia \(Gary\) Sang](#) won the ALE Best Student Paper Award for his paper: "Reaction Pathways Leading to Anisotropic Patterning of Cu,"

## Best Paper Award at tinyML Symposium



Princeton's [Guangyuan Hu](#) won the Best Paper Award at the tinyML 2021 Research Symposium! The paper, "[Smartphone Impostor Detection with Behavioral Data Privacy and Minimalist Hardware Support](#)," demonstrates Smartphone Impostor Detection (SID), which can quickly detect an attacker pretending to be the real owner of a smartphone. If an impostor is detected, SID denies access to the phone's data and resources. [Watch the presentation.](#)



### **Khan Earns NSF CAREER Award**

At the University of Virginia, JUMP researcher Samira Khan aims to redesign programmable switches and smart network interface cards to allow data to be processed in transit, a fundamental redesign of computer infrastructure. In recognition of her groundbreaking research, she has received a CAREER Award from NSF to create new networks that can harness the power of big data. Congratulations, Samira!

---



### **Blackstone Joins Howard University**

Congratulations to new CSE Ph.D. Jeremy Blackstone who will join the faculty at Howard University as assistant professor! As a Hardware Security researcher at UC San Diego, Jeremy was associated with Dr. Ryan Kastner's research group focused on Property Driven Hardware Security. He was also a member of the UC HBCU-funded initiative Engineers for Exploration (E4E) as part of the UCSD Howard Partnership for Graduate Success.

---



### **Karimzadeh Earns TI Fellowship**

Foroozan Karimzadeh has been awarded a Graduate Fellowship from SRC in partnership with Texas Instruments. Foroozan is a Ph.D. student in the Georgia Tech School of Electrical and Computer Engineering focusing on hardware and circuit solutions for tinyML—energy efficient machine learning systems deployed on the edge. Congratulations, Foroozan!

---



### **Salmon's PhaseCamouflage Offers Unique Solution to Reverse-Engineering Attacks**

Stony Brook University's Dr. Emre Salmon recently published research on PhaseCamouflage, a technique with low overhead that can thwart reverse-engineering attacks and IP theft by leveraging charge-recycling adiabatic circuits. Hardware Security research was funded jointly with NSF.





## Security for Global Supply Chain

See an excellent webinar from University of Florida's Dr. Domenic Forte, "[Trust but Verify: Hardware Assurance in a Globalized Supply Chain through Reverse Engineering](#)." As an HWS researcher, Dr. Forte protected microchips from [Probing Attacks](#) and now protects IP through [Secure and Private Function Evaluation](#).

---

### *Upcoming Events*

---

## Stefanie Tompkins at TECHCON 2021

We are thrilled to announce that DARPA Director Stefanie Tompkins will deliver the keynote at TECHCON 2021! This year's virtual event will take place September 13-16. TECHCON is the premier annual SRC student showcase, featuring 150 research presentations, technical papers and posters. TECHCON 2021 will highlight university research driving the future of semiconductor and ICT, as outlined in the [Decadal Plan for Semiconductors](#). Members may [register here](#).




---

### *Top 5 SRC Publications Viewed Across All Programs*

---

Don't miss the papers that received the most views on the SRC website over the last six weeks. Members of the associated programs have early access to the pre-publications.

- Environmental, Safety & Health Properties of "Onium" Photoacid Generators and their Photodegradation Products—SRC Pub ID [P104010](#)
- Highly Stable On-Chip Frequency References—SRC Pub ID [P104248](#)
- Self-Organized Phase-Composite Quantum Dot Solids with Superior Charge Transport—Pub ID [P104164](#)
- A Compact and Broadband On-Chip Delay Line Design Based on the Bridged T-Coil—SRC Pub ID [P104090](#)
- Final Report on Environmental, Safety & Health Properties of "Onium" Photoacid Generators and their Photodegradation Products—SRC Pub ID [P102455](#)