



Association for  
Computing Machinery

## NEWS RELEASE

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### **Srinivas Devadas Receives the 2026 ACM-IEEE CS Eckert-Mauchly Award**

#### ***Devadas' Work Formed the Bedrock of Modern Secure Processors***

**New York, NY, June 24, 2026** – ACM, the Association for Computing Machinery, and IEEE CS, the Institute of Electrical and Electronics Engineers Computer Society, have announced that Srinivas Devadas is the recipient of the 2026 [ACM-IEEE CS Eckert-Mauchly Award](#). Devadas, the Webster Professor of Electrical Engineering and Computer Science (EECS) at the Massachusetts Institute of Technology, is cited for pioneering contributions to secure architectures with broad industrial and academic impact.

Devadas pioneered the field of hardware security at a time when it was considered by many to be a niche or even fanciful pursuit. However, in the last 25 years, with the advent of smart phones and cloud computing, the majority of information is now stored in the computing infrastructure. Hardware security has become a fundamental design principle in computer architecture with most design groups now maintaining dedicated teams focused on security. Devadas coupled foundational research with a range of practical and widely adopted defenses that have shaped both academia and industry.

Devadas made foundational contributions in three main areas: Trusted Execution Environments (TEEs), Physical Unclonable Functions (PUFs), and Side Channel Resistant Processors. These innovations have touched the lives of billions of people by safeguarding their data in a digital world.

In 2003, Devadas' group at MIT introduced AEGIS, a new single-chip secure processor which incorporates mechanisms to authenticate the platform and software, as well as mechanisms to protect applications from physical and software attacks. AEGIS was the first demonstration of a single-chip processor providing cryptographically-attested Trusted Execution Environments (TEEs). This innovation was revolutionary at the time because it allowed programs to run securely even when the privileged operating system or external memory was completely compromised. TEEs were ahead of their time in protecting computers from a wide range of threats including operating systems, IT Staff, and untrusted software. TEEs are now used broadly to protect sensitive information and data in the cloud.

Secure computing requires secret keys, typically stored in physically-insecure, non-volatile memory. Devadas realized that manufacturing variation can be used to generate secret keys and invented Physical Unclonable Functions (PUFs). PUFs generate highly secure keys which only exist when the chip is powered. They are widely used now in leading commercial products including; Xilinx and Intel field programmable gate arrays (FPGAs), Samsung's Exynos processors, and many other cryptoprocessors (e.g., Maxim, Microsemi).

Software side-channel attacks including cache timing and Spectre attacks can circumvent TEE protections. In response, Devadas' group developed new secure processors (Sanctum, MI6, and Ascend) that can withstand side-channel attacks. Crucially, his group proposed a security-monitor-based architecture that minimally impacts hardware, which has inspired RISC-V enclaves and the first asymptotically-optimal, Oblivious Random Access Memory (ORAM) algorithm Path ORAM, which blocks memory access pattern attacks. Path ORAM is used with Intel SGX in the popular Signal messaging app.

After more than 37 years in the field, Devadas continues to be at the forefront of modern cryptography and its impact on hardware. He is also preparing the next generation of researchers for the challenges ahead in secure computer architecture.

### **Biographical Background**

Srinivas Devadas is the Webster Professor of Electrical Engineering and Computer Science (EECS) at the Massachusetts Institute of Technology (MIT). He received a B. Tech degree from IIT Madras, as well as MS and PhD degrees from the University of California at Berkeley.

Among his honors, Devadas has received the ACM SIGSAC Outstanding Innovation Award, the IEEE Cybersecurity Award for Practice, and the IEEE Circuits and Systems Society Charles A. Desoer Technical Achievement Award.

He will be formally recognized with the Eckert-Mauchly Award at the International Symposium of Computer Architecture [ISCA 2026](#), being held from June 27-July 1, in Raleigh, North Carolina.

### **About the Eckert-Mauchly Award**

ACM and IEEE Computer Society co-sponsor the [Eckert-Mauchly Award](#), which was initiated in 1979. It recognizes contributions to computer and digital systems architecture and comes with a \$5,000 prize. The award was named for John Presper Eckert and John William Mauchly, who collaborated on the design and construction of the Electronic Numerical Integrator and Computer (ENIAC), the pioneering large-scale electronic computing machine, which was completed in 1947.

### **About ACM**

[ACM, the Association for Computing Machinery](#), is the world's largest educational and scientific computing society, uniting computing educators, researchers, and professionals to inspire dialogue, share resources, and address the field's challenges. ACM strengthens the computing profession's collective voice through strong leadership, promotion of the highest standards, and recognition of technical excellence. ACM supports

the professional growth of its members by providing opportunities for life-long learning, career development, and professional networking.

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