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*Note: Image available at*

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**Immediate Release**

## **Leading NYU Tandon hardware security researcher named an IEEE fellow**

**World's largest technical professional association honors Ramesh Karri for contributions to securing the supply chain for electronic design and manufacturing**

**His recent pioneering work addresses 3D printing, nano-scale biochips**

BROOKLYN, New York, Weekday, Month xx, 2020 – New York University School of Engineering Professor [Ramesh Karri](#) has been named a fellow of the Institute of Electrical and Electronics Engineers (IEEE), the world's largest technical professional association, for his contributions to and leadership in trustworthy electronic hardware.

Karri is a professor of electrical and computer engineering at NYU Tandon, co-founder and co-chair of the [NYU Center for Cyber Security](#), and faculty leader for the world's most comprehensive student-led cybersecurity games, [CSAW](#) (Cyber Security Awareness Worldwide).

Karri, who has more than 250 journal and conference publications to his credit, was recognized for his seminal work in ensuring that the global hardware supply chain is as secure as possible. Hardware security is an especially great concern in an age when chips are being manufactured at supplier foundries far from where they are designed, giving bad actors ample opportunity to install malicious “Trojan horse” circuits or to pirate intellectual property. Vulnerabilities in the chain threaten not only personal computers and smartphones but automotive systems, major utilities, the aerospace industry, nuclear facilities, and industrial equipment.

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Karri is widely acknowledged for bringing the need for strong hardware security to the attention of the industry and for placing NYU Tandon at the forefront of the vital field. In 2002 he and his colleagues generated the first research on attack-resilient chip architecture, demonstrating before anyone else that integrated circuits' test and debug ports could be used by hackers. Since then, he pioneered the technique of microchip camouflaging, a tactic to prevent reverse engineering; delivered the first set of invited IEEE tutorials in hardware security in the U.S., Europe, and Latin America; presented the first research paper on split manufacturing, a means of thwarting counterfeiting by an untrusted foundry by dividing a chip's blueprint into several components and distributing each to a different fabricator; explored the vulnerabilities in digital microfluidic biochips, which are used by researchers and medical professionals for diagnostics, DNA sequencing, and environmental monitoring; and more.

Some of his latest research involves the growing additive manufacturing (3D-printing) industry, whose use of computer-aided design (CAD) files leaves it subject to threats like viruses and piracy.

Karri is also well-known in the hardware security world for founding the Embedded Security Challenge, which is held each year as part of CSAW. Research developed during the contest has propelled the entire field of hardware trust, and several students who have participated in the challenge, which was inaugurated in 2008, have gone on to make important contributions to the field. The challenge was foundational in the establishment of a National Science Foundation-supported network called [Trust-Hub](#), an open and collaborative digital clearinghouse and community-building site where researchers exchange papers, hardware platforms, source codes, and tools.

"I heartily congratulate Professor Karri on taking his well-deserved place as an IEEE fellow," said Dean Jelena Kovačević. "The honor is indicative of the pioneering nature and importance of his research, which has helped make NYU Tandon a leader in a field exceptionally important to the security of the world's cyber systems."

In addition to his IEEE Fellowship, Karri is the recipient of a Humboldt Fellowship and a National Science Foundation CAREER Award. His work has been funded by the Office of Naval Research, the Defense Advanced Research Projects Agency (DARPA), the Army Research Office, the Air Force Research Laboratory, the Semiconductor Research Corporation, and companies including Boeing, Intel, Ford, and Cisco.

### ***About the New York University Tandon School of Engineering***

*The NYU Tandon School of Engineering dates to 1854, the founding date for both the New York University School of Civil Engineering and Architecture and the Brooklyn Collegiate and Polytechnic Institute (widely known as Brooklyn Poly). A January 2014 merger created a comprehensive school of education and research in engineering and applied sciences, rooted in a tradition of invention and entrepreneurship and dedicated to furthering technology in service to society. In addition to its main location in Brooklyn, NYU Tandon collaborates with other schools within NYU, one of the country's foremost private research universities, and is closely connected to engineering programs at NYU Abu Dhabi and NYU Shanghai. It operates Future Labs focused on start-up businesses in Brooklyn and an award-winning online graduate program. For more information, visit [engineering.nyu.edu](http://engineering.nyu.edu).*

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