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Immediate Release

## International partnership gives U.S. and Indian students a chance to collaborate on 3D-printing cyber security

BROOKLYN, New York, June 9, 2021 – Addressing [vulnerabilities](#) in the additive manufacturing (3D printing) digital supply chain is a growing challenge in cyber security that will require trained defenders who can thwart bad actors seeking to steal digital designs or sabotage parts. The [NYU Tandon School of Engineering](#) is leading a joint U.S. and India program that gives a select group of undergraduate students in both countries a chance to find flaws, and think the way hackers think.

As part of the summer program, the **2021 USA-India International Research Experience for Students (IRES)** — kicking off virtually on June 7, 2021 — ten Indian and six U.S. undergraduate students, including three students from NYU Tandon, will conduct research focused on designing strategies to secure the additive manufacturing digital supply chain, with an eye to protecting intellectual property (IP) and using machine learning tactics to detect compromises in 3D printed parts.

[Nikhil Gupta](#), professor of mechanical and aerospace engineering at NYU Tandon, is coordinating the U.S. National Science Foundation (NSF)-funded project, in collaboration with Gaffar Gailani of New York City College of Technology (City Tech), and Mrityunjay Doddamani of the National Institute of Technology-Karnataka, Surathkal, India (NITK), who will be the program coordinator in India.

Manufacturing security is one of the [top priority areas](#) for the Biden administration and NYU's program will lead pathways for developing new methods and technologies as well as workforce that is trained in this unique area of manufacturing security.

“This new program, which extends an ongoing collaboration, gives students a great opportunity to both solve and create problems in additive manufacturing, while competing with each other on profound security challenges inherent to the industry's global, interconnected network, challenges that are growing apace as AM's use in manufacturing advances by leaps and bounds,” said Gupta. “It is also a great opportunity, by the way, to show how cultural exchanges can happen in virtual settings.”

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“We are at industry 4.0 to optimize operations and future innovations,” said Karanam Umamaheshwar Rao, director of NITK. “This program offers students an opportunity to explore new avenues in 3D printing with a focus on developing viable solutions for societal needs.” He emphasized the need for such programs that can provide technical as well as cultural exposure to the students of top universities around the world in NITK laboratories.

“As manufacturing becomes increasingly automated, additive manufacturing is playing a larger and larger role in how products from pacemakers to jet engines are manufactured,” said [Jelena Kovačević](#), dean of the NYU Tandon School of Engineering. “Because of inherent vulnerabilities in the 3D printing global supply chain, it is imperative that the next generation of security experts understand this new threat landscape. I’m pleased that Professor Gupta is giving our school an opportunity to lead in this critical area, while demonstrating how global collaboration and shared purpose can foster global security.”

### ***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. A January 2014 merger created a comprehensive school of education and research in engineering and applied sciences as part of a global university, with close connections to engineering programs at NYU Abu Dhabi and NYU Shanghai. NYU Tandon is rooted in a vibrant tradition of entrepreneurship, intellectual curiosity, and innovative solutions to humanity’s most pressing global challenges. Research at Tandon focuses on vital intersections between communications/IT, cybersecurity, and data science/AI/robotics systems and tools and critical areas of society that they influence, including emerging media, health, sustainability, and urban living. We believe diversity is integral to excellence, and are creating a vibrant, inclusive, and equitable environment for all of our students, faculty and staff. For more information, visit [engineering.nyu.edu](http://engineering.nyu.edu).*

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