Venkata Swamy 'Kalyan' Nakka

Contact Information	*Phone:* +1 361-516-7796 *E-mail:* kalyan@tamu.edu *Webpage:* https://kalyan-nakka.github.io/ LinkedIn Google Scholar

Research Interests Adversarial Machine Learning; AI/ML Security; Deep Learning.

Education

Texas A&M University Doctor of Philosophy (PhD) in Computer Science	01/2024 – 05/2027
Texas A&M University – Kingsville Master of Science (MS) in Computer Science	08/2021 – 05/2023
Indian Institute of Technology – Dhanbad Bachelor of Technology (BTech) in Mechanical Engineering	07/2012 – 04/2016

Academic & Professional Experience

Texas A&M University *Graduate Assistant – Research*	01/2024 – Present
Texas A&M University–Kingsville *Graduate Research Assistant* *Graduate Teaching Assistant*	 08/2022 – 05/2023 01/2022 – 07/2022
Soroco, India *Senior Software Engineer*	09/2019 – 07/2021
Infosys, India *Senior Software Engineer* *Software Engineer*	 11/2018 – 08/2019 11/2016 – 10/2018

Research Projects

SPIES Research Lab, TAMU Security of Emerging Artificial Intelligence Systems	01/2024 – Present
CPPES Lab, TAMUK Blockchain-based Cybersecurity for Photovoltaic Systems	08/2022 – 05/2023
CPPES Lab, TAMUK Resilient Cyber-Physical Security for Next-Generation Distributed Energy Resources at Grid Edge	08/2022 – 05/2023
WiSeMAN Research Lab, TAMUK Development of Fault-tolerant and Energy-efficient Wireless Sensor Networks	08/2022 – 05/2023

Technical Expertise

Programming Languages: Python, Kotlin, Java, SQL, Go
Platforms/Tools: Linux, Windows, Visual Studio Code, Android Studio, PyCharm
Machine Learning: TensorFlow, Jupyter, PyTorch

Teaching Experience

Guest Lectures

Quantum Threat to Current Cyber-Security, TAMUK	Spring 2023

Teaching Assistant

Massive Parallel Computing, TAMUK	Summer 2022
Foundations of Computer Science, TAMUK	Spring 2022

Invited Talks	TAMUK Graduate Science and Engineering Research Colloquium Series	2023
	SunSpec Alliance 2022 Annual Meeting	2022

Honors & Achievements	**Distinguished Student Award**	2023
	Awarded to only 1 graduate student per semester at TAMUK (University level)	
	Dean's Merit Scholarship for exceptional academic performance	2022
	Awarded to top 2% of Engineering graduate students at TAMUK (College level)	
	Computer Science Graduate Scholarship for exceptional academic performance	2021
	Awarded to top 5% of CS Graduate students at TAMUK (Department level)	
	Rockwell International Scholarship for exceptional academic performance	2021
	Awarded to top 2% of International graduate students at TAMUK (Department level)	
	Insta Award	2018
	Infosys, India	
	IIT MCM Scholarship for exceptional academic performance	2013 – 2016
	Awarded to top 20% of Undergraduate students at IIT Dhanbad (University level)	
	All India Rank 10760 (98.2 %ile)	2012
	Indian Institute of Technology Joint Entrance Examination (IIT-JEE)	
	Entrance exam for IISc & IITs	
	All India Rank 8076 (99.2 %ile)	2012
	All India Engineering Entrance Examination (AIEEE)	
	Entrance exam for NITs	

Fellowships	TAMU Graduate Research Assistantship (US $12,000 p.a.)	2024 – 2025
	Graduate Research Assistant Scholarship (US $6,000 p.a.)	2022 – 2023
	Dean's Merit Scholarship (US $1,000 p.a.)	2022 – 2023
	TAMUK In-State Scholarship (US $8,500 p.a.)	2021 – 2023
	HEERF III Student Scholarship (US $1,600 p.a.)	2021 – 2022
	Computer Science Graduate Scholarship (US $1,000 p.a.)	2021 – 2022
	Rockwell International Scholarship (US $1,000 p.a.)	2021 – 2022
	IIT MCM Scholarship (IND ₹72,000 p.a.)	2013 – 2016

Publications

Articles in Peer-Reviewed Conference Proceedings

[1] Field demonstration of Blockchain-based security for a Solar Farm
BoHyun Ahn, **Kalyan Nakka**, Taesic Kim
ECCE – IEEE Energy Conversion Congress and Exposition, 2024

[2] Post-Quantum Cryptography (PQC)-Grade IEEE 2030.5 for Quantum Secure Distributed Energy Resources Networks
Kalyan Nakka, Seerin Ahmad, Logan Atkinson, Taesic Kim, Habib M. Ammari
ISGT – IEEE PES Innovative Smart Grid Technologies, 2024

[3] Square Tessellation for Stochastic Connected k-Coverage in Planar Wireless Sensor Networks
Kalyan Nakka, Habib M. Ammari
ISCC – IEEE Symposium on Computers and Communications, 2023

Articles in Peer-Reviewed Journals

[1] Enhancing Photovoltaic System Security using Blockchain and Security Module
BoHyun Ahn, **Kalyan Nakka**, Taesic Kim, Jinchun Choi, Seerin Ahmad, Alan Mantooth
IEEE OJPEL – IEEE Open Journal of Power Electronics (submitted)

[2] Hierarchical Deployment and Square Tessellation for Connected k-Coverage in Heterogeneous Planar Wireless Sensor Networks
Kalyan Nakka, Habib M. Ammari
ACM TOSN – ACM Transactions on Sensor Networks, 2025

[3] Blockchain-assisted Resilient Control for Distributed Energy Resource Management Systems
Seerin Ahmad, **Kalyan Nakka**, BoHyun Ahn, Taesic Kim, Dongjun Han, Dongjun Won
ACCESS – IEEE Access, 2024

[4] An Energy-Efficient Irregular Hexagonal Tessellation-based Approach for Connected k-Coverage in Planar Wireless Sensor Networks
Kalyan Nakka, Habib M. Ammari
ADHN – Ad Hoc Networks, 2024

[5] k-CSqu: Ensuring connected k-coverage using Cusp Squares of Square Tessellation
Kalyan Nakka, Habib M. Ammari
JPDC – Journal of Parallel and Distributed Computing, 2023

Preprints

[1] Is On-Device AI Broken and Exploitable? Assessing the Trust and Ethics in Small Language Models
Kalyan Nakka, Jimmy Dani, Nitesh Saxena

[2] Breaking Indistinguishability with Transfer Learning: A First Look at SPECK32/64 Lightweight Block Ciphers
Jimmy Dani, **Kalyan Nakka**, Nitesh Saxena

Service

Reviewer

ACM Transactions on Privacy and Security (TOPS)	2024
IEEE Energy Conversion Conference and Exposition (ECCE)	2024

Sub-Reviewer

Annual Computer Security Applications Conference (ACSAC)	2024
IEEE International Conference on Distributed Computing Systems (ICDCS)	2024
ACM Conference on Computer and Communications Security (CCS)	2025

Student Mentoring

Ausmit Mondal, Undergraduate Student, Texas A&M University	2024

References

Dr. Nitesh Saxena, Texas A&M University — Email: nsaxena@tamu.edu
Dr. Taesic Kim, University of Missouri — Email: tkx96@missouri.edu
Dr. Habib M. Ammari, Texas A&M International University — Email: habib.ammari@tamiu.edu