

Venkata Swamy 'Kalyan' Nakka

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| Contact Information | <i>Phone:</i> +1 361-516-7796 <i>E-mail:</i> kalyan@tamu.edu <i>Webpage:</i> https://kalyan-nakka.github.io/ LinkedIn Google Scholar |
| Research Interests | Deep Learning; Adversarial Machine 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 <i>Graduate Assistant – Research</i> 01/2024 – Present Texas A&M University–Kingsville <i>Graduate Research Assistant</i> 08/2022 – 05/2023 <i>Graduate Teaching Assistant</i> 01/2022 – 07/2022 Soroco, India <i>Senior Software Engineer</i> 09 2019 – 07/2021 Infosys, India <i>Senior Software Engineer</i> 11/2018 – 08/2019 <i>Software Engineer</i> 11/2016 – 10/2018 |
| Research Projects | U. S. Department of Energy (DoE) 08/2022 – 05/2023 Multilevel Cybersecurity for Photovoltaic Systems [DE-EE0009026] National Science Foundation (NSF) 08/2022 – 05/2023 A Resilient Cyber-Physical Security Framework for Next-Generation Distributed Energy Resources (DER) at Grid Edge [2219733] National Science Foundation (NSF) 08/2022 – 05/2023 MBARKA: A Multi-tier Basic Architecture for fault-tolerant and K-secure IoT-based Autonomous campus monitoring systems [2219785] |
| Technical Expertise | Programming Languages: Python, C#, Java, SQL, Go, C++ Platforms/Tools: Linux, Windows, Visual Studio, Visual Studio Code Machine Learning: NumPy, scikit-learn, TensorFlow, Jupyter notebook Cloud: AWS, Azure, GCP Frameworks: .Net, Django, Flask Technologies: Docker, Git, Elasticsearch, HTML, CSS, Bootstrap, Angular, Kubernetes |

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| Teaching Experience | Guest Lectures | Quantum Threat to current Cyber-Security, TAMUK | Spring 2023 |
| | Teaching Assistant | Massive Parallel Computing, TAMUK Foundations of Computer Science, TAMUK | Summer 2022 Spring 2022 |
| Invited Talks | | TAMUK Graduate Science and Engineering Research Colloquium Series | 2023 |
| | | SunSpec Alliance 2022 Annual Meeting | 2022 |
| Honors & Achievements | Distinguished Student Award | Awarded to only 1 graduate student per semester at TAMUK (University level) | 2023 |
| | Dean's Merit Scholarship for exceptional academic performance | Awarded to top 2% of Engineering graduate students at TAMUK (College level) | 2022 |
| | Computer Science Graduate Scholarship for exceptional academic performance | Awarded to top 5% of CS Graduate students at TAMUK (Department level) | 2021 |
| | Rockwell International Scholarship for exceptional academic performance | Awarded to top 2% of International graduate students at TAMUK (Department level) | 2021 |
| | Insta Award | Infosys, India | 2018 |
| | IIT MCM Scholarship for exceptional academic performance | Awarded to top 20% of Undergraduate students at IIT Dhanbad (University level) | 2013 – 2016 |
| | All India Rank 10760 (98.2 %ile) | Indian Institute of Technology Joint Entrance Examination (IIT-JEE) Entrance exam for IISc & IITs | 2012 |
| | All India Rank 8076 (99.2 %ile) | All India Engineering Entrance Examination (AIEEE) Entrance exam for NITs | 2012 |
| | Fellowships | Graduate Research Assistant Scholarship (US \$6000 p.a.) | |
| 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 Journals | | |
| | [1] | An Energy-Efficient Irregular Hexagonal Tessellation-based Approach for Connected k -Coverage in Planar Wireless Sensor Networks Kalyan Nakka , Habib M. Ammari AdHoc – Elsevier's Ad Hoc Networks, 2024 | |
| | [2] | k -CSqu: Ensuring connected k -coverage using Cusp Squares of Square Tessellation Kalyan Nakka , Habib M. Ammari JPDC – Elsevier's Journal of Parallel and Distributed Computing, 2023 | |
| | [3] | Influence of Aerodynamic Add-on devices on Aerodynamic performance of an Automobile: A Numerical Study Kalyan Nakka , Dipen Kumar Rajak, L A Kumaraswamidhas RoJAE – Romanian Journal of Automotive Engineering, 2017 | |

- [4] Experimental and Numerical study on energy absorption characteristics of mild steel and aluminium square tubes under axial loading
Kalyan Nakka, Bharadwaja Reddy, Dipen Kumar Rajak, L A Kumaraswamidhas
RoJAE – Romanian Journal of Automotive Engineering, 2016
- [5] Experimental and Numerical investigation on torsional failure of cardan joint of an intermediate steering shaft
Dipen Kumar Rajak, **Kalyan Nakka**, Bharadwaja Reddy, L A Kumaraswamidhas
RoJAE – Romanian Journal of Automotive Engineering, 2016

Articles in Peer-Reviewed Conference Proceedings

- [1] 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
- [2] 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

Community Service Reviewer

ICDCS – IEEE International Conference on Distributed Computing Systems

2024

ECCE – IEEE Energy Conversion Conference and Expo

2024