Dr. Ambairam Muthu Sivakrishna

Assistant Professor, Information Technology, National Institute of Technology Karnataka.
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Education

Program	Institution / Board	CGPA/%	Year
Ph.D. (Computer Science & Engg.)	National Institute of Technology Tiruchirappalli	9.5	Mar. 2026
M.Tech. (Software Engg.)	Indian Institute of Information Technology Tiruchirappalli	9.24	2017
B.Tech. (Information Technology)	MITS Madanapalle (JNTU Anantapur)	79.92	2015
XII (MPC)	Narayana Junior College	93.8	2008
X	Royal English Medium High School	89.16	2006

Teaching Experience

1. Assistant Professor **November 2026 -Till Date**

(Department of Information Technology) *National Institute of Technology Karnataka, Surathkal*

- Courses Handled:

1. Assistant Professor **June 2026 -Ocotber 2026**

(School of Advanced Computing) *Alliance University, Bengaluru*

- Courses Handled: Cryptography and Network Security, Discrete Mathematics and Generative AI.

2. HTRA-MHRD **2022-2025**

(Department of Computer Science & Engineering) *National Institute of Technology Tiruchirappalli*

- Courses Handled: Artificial Intelligence, Software Engineering, Software Project Management.

3. Temporary Faculty **2017-2019**

(Department of Computer Science & Engineering) *Indian Institute of Inforamtion Technology Tiruchirappalli*

- Courses Handled: Programming with C, Software Engineering, Software Project Management, Randomized Algorithms, Cloud Computing.

Research Interests

- Trustworthy AI & Cybersecurity
- Theoretical Analysis of Neural Networks
- Machine Unlearning for Secure AI
- Formal Specification & Verification Systems
- Neuro-Symbolic & Quantum-Inspired Learning Models

Professional Membership

- **IEEE** - Institute of Electrical and Electronics Engineers, ID: 98196084 *Societies:* Pattern Analysis and Machine Intelligence (PAMI), Quantum Technical Community, Security & Privacy, Software Engineering
- **ACM** - Association for Computing Machinery, ID: 3333784
- **CSI** - Computer Society of India, ID: 7111250006

Publications

Journal Publications

J1: **An Adaptive Insider Threat Detection Framework Using Causal Analysis and Liquid Neural Networks**. *Security and Privacy*, 9(1), (2026). DOI:10.1002/spy2.70157, (ESCI, IF: 2.9).

J2: **An Efficient Insider Threat Detection Framework Using Bayesian-Optimized XGBoost**. *Security and Privacy*, 8(6), (2025). DOI: 10.1002/spy2.70122, (ESCI, IF: 2.9).

J3: **Cyber Insights: Exploring Image-Based and Vector-Based Feature Representations in Insider Threat Detection**. *International Journal of Data Science and Analytics, Vol. 21, (2025). Article 13, DOI: 10.1007/s41060-025-00960-3* (ESCI & Scopus, IF: 2.9, Q1).

J4: **An Efficient Pattern-Based Approach for Insider Threat Classification Using Image-Based Feature Representation**. *Journal of Information Security and Applications*, 73, 103434 (2023). DOI: 10.1016/j.jisa.2023.103434, (SCIE, IF: 4.4, Q1).

Conference Publications

C1: **TRUST-IT: Trustworthy User-Level Security Learning for Insider Threat Detection**. *International Conference on Quantum Enhanced AI & Secure Computing (QASC 2026 - Chicago Stage University & Grambling State University, USA), Springer.* (Status: Presented).

C2: **Insider Threat Detection: A Comprehensive Review of Evolving Detection Techniques, Datasets, and Challenges**. *4th International Conference on Artificial Intelligence: Theory and Applications (AITA 2026 - IBS, Bangalore).* (Status: Accepted & Presented).

C3: **QUANT-IT: Quantum Embeddings with NGBoost for Insider Threat Detection**. *Proceedings of the 9th IEEE International Conference on Information and Communication Technology (CICT 2025 - IIITDM Kancheepuram).* (Status: Published).

C4: **Temporal Quantum Neural Networks for Insider Threat Detection**. *6th International Conference on Recent Advances in Information Technology (RAIT 2025 - IIT Dhanbad).* (Status: Published).

C5: **Insider Threat Detection on CERT Data Using Pre-trained ResNet**. *2nd Global Conference on Information Technologies and Communications (GCITC 2024 - REVA University).* (Status: Published).

C6: **AUBIT: An Adaptive User Behaviour Based Insider Threat Detection Technique Using LSTM-Autoencoder**. *International Conference on Recent Trends in Information Technology and Applications (ICRTITA 2022 - VelTech University).* (Status: Published).

Professional Service

- Reviewer - Engineering Applications of Artificial Intelligence (Elsevier, SCIE, Q1, IF: 9.0)
- Reviewer - BioData Mining (Springer Nature, SCIE, Q1, IF: 6.5)
- Reviewer - Scientific Reports (Springer Nature, SCIE, Q1, Impact Factor: 3.9)
- Reviewer - International Journal of Machine Learning and Cybernetics (Springer Nature, SCIE, Q2, IF: 3.4)
- Reviewer - Discover Computing (Springer Nature, SCIE, Q2, IF: 1.9)
- Reviewer - Discover Artificial Intelligence (Springer Nature, Scopus)
- Reviewer - Multimedia Tools and Applications (Springer Nature, Scopus)
- Reviewer - Journal of Umm Al-Qura University for Engineering and Architecture (Springer Nature, Scopus)
- Reviewer - IEEE International Conference on Adaptive Intelligence, Modeling and Simulation (ICAIMS 2026), Universiti Malaysia Sabah
- Reviewer - International Conference on Recent Advances in Electronics, Communication, Computing, Automation, and Power (RECCAP 2026), IIT Palakkad
- Reviewer - International Conference on Information and Communication Technology (CICT 2025), IIITDM Kancheepuram

- Technical Committee Member & Reviewer - International Conference on Speech and Language Technologies for Low-Resource Languages (SPELL 2025), IIIT Kottayam
- Reviewer - International Conference on Emerging Technologies in Computer Science for Interdisciplinary Applications (ICETCS 2024), IEEE Bangalore Section

Technical Skills

Programming: C, C++, Java, Python

Machine Learning & Deep Learning: DoWhy, PennyLane, PyTorch, Scikit-learn, TensorFlow

Cybersecurity: Anomaly detection, Insider threat analytics

Tools: Anaconda, Git, Jupyter, LaTeX

Platforms: Linux, Windows

Workshops & FDPs

- Joint Faculty Development Programme on *Quantum Computing*, **Electronics & ICT Academy, IIT Roorkee**, 19 June-22 July 2026 **(Participant)**.
- Online Certification Course on *Programming with Java by Amazon*, **Coursera**, July 2026 **(Grade:97%)**.
- 40-hour Online FDP on *QT-10 Solid State Physics for Quantum Technologies*, **Electronics & ICT Academies, MNIT Jaipur / IIT Kanpur / IIT Roorkee / IIT Guwahati / IIITDM Jabalpur** (funded by MeitY, endorsed by AICTE / NQM / UGC), May 2026 **(Participant, Performance: Excellent)**.
- 44-hour Online FDP on *QT-09 Engineering Foundations of Quantum Technologies*, **Electronics & ICT Academies, MNIT Jaipur / IIT Kanpur / IIT Roorkee / IIT Guwahati / IIITDM Jabalpur** (funded by MeitY, endorsed by AICTE / NQM / UGC), April–May 2026 **(Participant, Performance: Excellent)**.
- Online FUP on *Application of Artificial Intelligence, Machine Learning and Blockchain for FinTECH Cyber Security*, **IIT Ropar**, March 2026 **(Participant)**.
- Online FDP on *Generative AI*, **IBM SkillsBuild**, December 2025 **(Participant)**.
- Five-day Online FDP on *Quantum Computing with Machine Learning & AI*, **IIT Madras**, April 2025 **(Participant)**.
- Five-day Online FDP on *ML & DL Demystified: A Hands-on, Theory-Driven Workshop*, **NIT Tiruchirappalli**, April 2024 **(Organizer & Resource Person)**.
- Winter Seminar Series on *Deep Learning Algorithms and its Implementation*, **SRM Institute of Science & Technology**, December 2023 **(Resource Person)**.
- Five-day Online Workshop on *Deep Learning Principles and its Applications for DRDO Scientists*, **NIT Tiruchirappalli**, December 2022 **(Organizer & Resource Person)**.
- Workshop on *Bio-inspired Optimization Algorithms using MATLAB*, **IEEE & IEEE Computer Society, NIT Tiruchirappalli**, January 2022 **(Participant)**.
- Workshop on *Detecting Deceit Information from Brain Activity*, **IEEE & IEEE Computer Society, NIT Tiruchirappalli**, June 2021 **(Participant)**.

Administrative Activities

- **UG Dissertation Supervisor** - IIIT Tiruchirappalli. Guided three undergraduate dissertation projects in the Department of Computer Science.
- **CPWD Coordinator** - IIIT Tiruchirappalli. Assisted in coordinating activities related to campus construction.
- **Hostel Warden** - IIIT Tiruchirappalli. Oversaw hostel administration, student welfare, and residential discipline.
- **Faculty In-Charge (Sports & Photography Clubs)** - IIIT Tiruchirappalli. Coordinated institute sports activities, tournaments, team logistics, led event photography and maintained media archives.

Achievements & Awards

- **Institute Gold Medal** for academic performance in **M.Tech (Software Engineering)**, IIIT Tiruchirappalli.
- **University Gold Medal** for securing First Rank in **B.Tech (Information Technology)** from JNTU Anantapur.
- **Pratibha Award** conferred by the **Government of Andhra Pradesh** for academic excellence in B.Tech.

- **Best Paper Award - ICRTITA 2022** for the paper *"AUBIT: An Adaptive User Behaviour Based Insider Threat Detection Technique Using LSTM-Autoencoder"*.
- **GATE Qualified (2015)** in Computer Science & Information Technology.
- **UGC-NET Qualified** in Computer Science & Applications (2018 & 2020).

Informals

- **Captain** - U.G and P.G Institute Volleyball Teams.
- **Silver Medalist (Volleyball)** - All India Inter-NIT Sports Meet held at NIT Warangal (2025).
- **Two-time Bronze Medalist (Volleyball)** - Sportsfete Intramural Competition, NIT Tiruchirappalli (2023 & 2024).
- **Participant (Volleyball)** - Inter Collegiate Games Meet, JNTU Anantapur (2014 & 2015).

Languages

- English
- Telugu
- Tamil
- Hindi

(Ambairam Muthu Sivakrishna)