National Institute of Technology, Tiruchirappalli:
Performa for CV of Faculty/ Staff Members

Curriculum Vitae

Brief Profile:

Dr. Aguru Aswani Devi is currently serving as an Assistant Professor in the Department of Computer Applications at National Institute of Technology Tiruchirappalli. She obtained her Ph.D. from the Department of Computer Science and Engineering at National Institute of Technology Warangal. She completed her M.Tech in Computer Science and Engineering from GMR Institute of Technology, where she was awarded a gold medal in recognition of her outstanding academic performance. She earned her B.Tech in Computer Science and Engineering from IIIT Basara. She has research and teaching experience, including serving as a Junior Research Fellow (JRF) on a DST-funded project and working as an Assistant Professor in the Department of CSE at SRM University AP.

Her research interests focus on Blockchain-assisted lightweight security protocols, AI-driven cyber-attack detection, and secure communication frameworks using post-quantum cryptography, specifically tailored for IoT and IIoT environments. Her work emphasizes designing scalable, efficient, and secure authentication mechanisms for mission-critical systems.

Dr. Aswani Devi has published her research in leading international journals, including IEEE Transactions on Reliability, IEEE Transactions on Consumer Electronics, ACM Transactions on Internet Technology, and Information Sciences. She has also presented her work at several reputed international conferences and contributed to book chapters in emerging areas of cybersecurity and IoT. Her current research direction is centered on interdisciplinary, real-world problem solving, with a strong focus on industry collaboration and international research partnerships, particularly in the domains of Blockchain-enabled secure IoT systems, Smart healthcare environments and mission-critical IIoT systems.

1. Name: Dr. Aguru Aswani Devi
2. Designation: Assistant Professor (Grade - II)
3. Office Address: MSc lab, IT building, Department of Computer Applications
4. Telephone (Direct) (Optional):

   Telephone : Extn (Optional):

   Mobile (Optional): 9493241602
5. Email (Primary): aswani@nitt.edu Email (Secondary) : aswanidevi.nitt@gmail.com

6. Field(s) of Specialization: IoT Security, Blockchain Technology, Post-quantum Cryptography, Deep learning

7. Employment Profile

Job Title	Employer	From	To
Assistant Professor (Grade - II)	NIT Trichy	18-12-2025	-
Assistant Professor	SRM University AP	13-10-2024	17-12-2025
JRF	DST-TIDE	10-01-2019	20-10-2019

8. Academic Qualifications (From Highest Degree to High School):

Examination	Board / University	Year	Division/ Grade	Subjects
PhD	NIT Warangal	2025	-	CSE
M.Tech	GMR Institute of Technology	2018	Distinction	CSE
B.Tech	IIIT Basara	2014	Distinction	CSE
PUC	IIIT Basara	2010	Distinction	M.Bi.P.C
SSC	SSC Board	2008	First Class	-

9. Academic/Administrative Responsibilities within the University

Position	Faculty/Department/Centre/Institution	From	To
Department-level Coordinator for timetable and exams	Computer Applications	27-01-2026	-

10. Academic/Administrative Responsibilities outside the University

Position	Institution	From	To
-	-	-	-

11. Awards, Associateships etc.

Year of Award	Name of the Award	Awarding Organization
2024	Best Journal Publication Award	NIT Warangal
2019	Prathiba Award	Government of Andhra Pradesh

12. Fellowships

Year of Award	Name of the Fellowship	Awarding Organization	From (Month/Year)	To (Month/Year)
-	-	-	-	-

13. Details of Academic Work

(i) Curriculum Development

(ii) Courses taught at Postgraduate and Undergraduate levels:

a. Computer Networks
b. Design and Analysis of Algorithms
c. Data Structures
d. Introduction to Python Programming
e. Big Data Analytics

(iii) Projects guided at Postgraduate level:

(iv) Other contribution(s)

14. Details of Major R&D Projects

Title of Project	Funding Agency	Duration		Status
		From	To	Ongoing/ Completed
-	-	-	-	-

15. Number of PhDs guided

Name of the PhD Scholar	Title of PhD Thesis	Role(Supervisor/ Co-Supervisor)	Year of Award
-	-	-	-

16. Participation in Workshops/ Symposia/ Conferences/ Colloquia /Seminars/ Schools etc. (mentioning the role)

Date (s)	Title of Activity	Level of Event (International/ National/ Local)	Role (Participant/ Speaker/ Chairperson, Paper presenter, Any other)	Event Organized by	Venue
16–17 February 2024	Conference	National	Paper presenter	IIWCS 2024	NIT Rourkela

18–22 December 2022	Conference	International	Paper presenter	iSES 2022	NIT Warangal
July 14-18, 2023	Short-Term Course	International	Participant	Department of CSE, IIT Kharagpur (CEP)	IIT Kharagpur
November 3-5, 2022	Workshop	National	Participant	Department of CSE, IIIT Sri City	IIIT Sri City
March 8-10, 2021	Conference	International	Paper presenter	ICWEST 2021	NIT Warangal

17. Workshops/ Symposia/ Conferences/ Colloquia/Seminars Organized (as Chairman/ Organizing Secretary/ Convenor / Co-Convenor)

Title of Activity	Level of Event (International/ National/ Local)	Date (s)	Role	Venue
-	-	-	-	-

18. Invited Talks delivered

Topic	Date	Inviting Organization
Multi Vector DDOS Attack Detection Using Deep Learning	August 12, 2022	Kakatiya University - Warangal
Significance of real-time Internet of Things applications	September 9, 2022	GMR Institute of Technology - Rajam
Significance of cloud computing for IoT applications and Introduction to Insights Hub	June 7, 2023	National Institute of Technology - Warangal
Demonstration of various Internet of Things applications on Insights Hub	June 8, 2023	National Institute of Technology - Warangal
Security primitives for the Internet of Things	October 11, 2023	National Institute of Technology - Warangal
Deep learning-based Intrusion Detection System: Hands-on	June 07, 2024	FDP at National Institute of Technology - Warangal
Scyther-based verification of security protocols: Hands-on	June 08, 2024	FDP at National Institute of Technology - Warangal
Verification of Blockchain-based IoT device authentication protocols: Hands-on	July 19, 2024	FDP at Dadi Institute of Engineering & Technology, Vishakapatnam

19. Membership of Learned Societies

Type of Membership (Ordinary Member/ Honorary Member / Life Member)	Organization	Membership No. with date
-	-	-

20. Academic Foreign Visits

Country	Duration of Visit	Programme
-	-	-

21. Publications

(A) Refereed Research Journals:

Author(s)	Title of Paper	Journal	Volume (No.)	Page numbers	Year	Impact Factor of the Journal (Optional)
Aswani Devi Aguru; Suresh Babu Erukala	BC-AEAD: Blockchain-enabled Lightweight AEAD Combiner for IoT Device Authentication	IEEE Transactions on Consumer Electronics			2026	12.18
Ch Madhu Bhushan, Priya Koppuravuri, Nomitha Prasanthi, Firoj Gazi, Md Muzakkir Hussain, Mohammad Abdussami, Aguru Aswani Devi, Jamilurahman Faizi	Deploying TinyML for energy-efficient object detection and communication in low-power edge AI systems	Scientific Reports			2025	3.9
Suresh Babu Erukala, Dimitar Tokmakov, Aswani Devi Aguru, Rajesh Kaluri, Anna Bekyarova-Tokmakova, Nevena Mileva	An End-to-End Secure Communication Framework for Smart Homes Environment using Consortium Blockchain System	IEEE Access			2025	3.6

Aswani Devi Aguru, Suresh Babu Erukala	Know Your Device (KYD): A Blockchain based Self-sovereign Identity Management Framework for IoT Devices	International Journal of Ad Hoc and Ubiquitous Computing			2025	1.28
Aswani Devi Aguru, Suresh Babu Erukala, Rajkumar Singh Rathore, Rutvij H Jhaveri, Francesco Benedetto	Blockchain-based Resilient Pairing and Bonding of BLE Devices using Deep Reinforcement Learning	IEEE Transactions on Consumer Electronics			2024	12.18
Aswani Devi Aguru, Amrit Pandey, Suresh Babu Erukala, Ali Kashif Bashir, Yaodong Zhu, Rajesh Kaluri, Thippa Reddy Gadekallu	Reliable-RPL: A Reliability aware RPL Protocol using Trust-based Blockchain System for Internet of Things	IEEE Transactions on Reliability			2024	6.68
Aswani Devi Aguru, Suresh Babu Erukala	"OTI-IoT: A Blockchain-based Operational Threat Intelligence Frameworkfor Multi-vector DDoS Attacks	ACM Transactions on Internet Technology			2024	5.10
Aswani Devi Aguru, Suresh Babu Erukala	A lightweight multi-vector ddos detection framework for iot-enabled mobile health informatics systems using deep learning	Elsevier-Information Sciences			2024	8.25
Aswani Devi Aguru, Erukala Suresh Babu,	Integrated industrial reference	Algorithms - MDPI			2022	3.15

Soumya Ranjan Nayak, Abhisek Sethy, Amit Verma	architecture for smart healthcare in internet of things: a systematic investigation					

(B) Conferences/Workshops/Symposia Proceedings

Author(s)	Title of Abstract/ Paper	Title of the Proceedings	Page numbers	Conference Theme	Venue	Year
Aswani Devi Aguru, Medipelly Rampavan, Firoj Gazi, Md Muzakkir Hussain, Suresh Babu Erukala, Mohammad Abdussami	A Blockchain-based DDoS Attack Mitigation Framework for Mission-critical IIoT Environments	2025 IEEE 36th International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC)	1-6	Next-generation wireless communications and networking (5G/6G), AI-enabled communication systems, and IoT	Istanbul, Turkiye	2025
Erukala Suresh Babu, Banoth Krishna Mohan Naik, Aguru Aswani Devi, Erukala Sudarshan	A Trust-Based Blockchain Framework for Mitigating Smartphone Theft Incidents	TENCON 2025-2025 IEEE Region 10 Conference (TENCON)	1441-1445	Unleashing Innovation: Elevating Technologies to New Horizons	Sabah International Convention Centre (SICC), Kota Kinabalu, Sabah, Malaysia	2025
Mohammad Abdussami, Madhu Sudan Rao Ramani, Krishna Manikanta Singothu, Sai Krishna Gurram, Aswani Devi Aguru, Md Muzakkir Hussain, Firoj Gazi	Transparent Intrusion Detection Using ML: Integrating Explainable Models for Cybersecurity	2025 IEEE 36th International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC)	1-6	Next-generation wireless communications and networking (5G/6G), AI-enabled communication systems, and IoT.	Istanbul, Turkiye	2025
Meka Naga Nandini Devi, Ch Madhu Bhushan, Siripalli Hemanth Durga Kumar, Firoj Gazi, Md Muzakkir	ConFi: A Confidence-Aware Framework for Ultra-Precise Indoor	2025 IEEE 36th International Symposium on Personal, Indoor and Mobile Radio	1-6	Next-generation wireless communications and networking (5G/6G), AI-enabled	Istanbul, Turkiye	2025

Hussain, Aguru Aswani Devi	Localization in 6G Networks Using UAV-Assisted Wi-Fi Fingerprints	Communications (PIMRC)		communication systems, and IoT.		
Aswani Devi Aguru, Suresh Babu Erukala, Mekala Srinivasa Rao, Rajesh Kaluri, Thippa Reddy Gadekallu	SCS: A Secure Cloud Storage Framework with Enhanced Integrity and Auditability Using Consortium Blockchain System	8th IEEE International Conference on Smart Internet of Things (SmartIoT 2024)	-	Smart Internet of Things, Blockchain, Cloud Security	China	2024
Aswani Devi Aguru, Erukala Suresh Babu	Blockchain-based Edge Device Authentication Mechanism in SDN-enabled IoT Networks	2024 IEEE 9th International Conference for Convergence in Technology (IEEE9th I2CT 2024)	-	Convergence Technology, IoT, SDN, Blockchain	Pune, India	2024
Aswani Devi Aguru, Erukala Suresh Babu	Blockchain-based Self-Sovereign Identity Management Framework for Internet of Things	IIWCS 2024	-	Wireless Communication Systems, IoT Security, Identity Management	NIT Rourkela	2024
Suresh Babu Erukala Aswani Devi Aguru, I. Kavati, and B. K. N. Srinivasarao	Blockchain-based authentication mechanism for edge devices in fog-enabled iot networks	TENCON 2023 - 2023 IEEE Region 10 Conference (TENCON)	558–563	Emerging Technologies, IoT, AI, Communication Systems	Chiang Mai	2023
Suresh Babu Erukala Aswani Devi Aguru, and B. Padma	A trust-based blockchain system for secured migration of	Mobile Internet Security	308–322	Mobile Security, IoT, Blockchain	Singapore	2023

	ble devices in iot networks					
Aswani Devi Aguru, Suresh Babu Erukala	A lightweight ddos detection mechanism in iot networks using entropy and expectation of packet size	2022 IEEE International Symposium on Smart Electronic Systems (iSES 2022)	101–106	Smart Electronic Systems, IoT Security	NIT Warangal	2022
Aswani Devi Aguru, Suresh Babu Erukala, and I. Kavati	Smart contract based next generation public key infrastructure (pki) using permissionless blockchain	Hybrid Intelligent Systems 2022	625–635	Hybrid Intelligent Systems, AI, Blockchain	Virtual conference	2022

(C) Books & Monographs

Author(s)	Title of Book/Monograph	Name of Publishers	Year of Publication	ISSN/ISBN Number
-	-	-	-	-