

## Faculty Profile

Name: Dr. Usha M. S.  
Designation: Associate Professor  
Department: Computer Science & Engineering  
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I, Dr. Usha M. S. is a senior academician, researcher and academic administrator with over **30.6 years of teaching experience** and **27 years of academic leadership as Head of the Department in reputed engineering institutions**. I am currently serving as Associate Professor at NIE Mysuru, contributing significantly to academic excellence, research, accreditation processes and outcome-based education. Having specialization in Mobile Ad Hoc Networks (MANETs), Network Security and Trust based Routing guided over 200+ undergraduate projects, postgraduate projects and Ph.D. students. My academic career spans institutions such as NIEIT Mysuru, NMAMIT Nitte and VVIET Mysuru, where I have played a pivotal role in curriculum development, faculty mentoring and departmental administration. I have published Journals in Scopus, Web of Science and other indexed journals and presented papers in National and International Conferences. **I have recently received International Academic Leadership Award 2025 from ICPSCE, Vijayawada, India** and recipient of multiple Best Paper Awards in National and International Conferences and actively serves as a reviewer, jury member, conference chair and resource person at national and international conferences. I hold 3 granted Indian patents, reflecting my strong orientation towards innovation, applied research and societal problem-solving. Also, I have successfully secured KSCST-funded student project grants and Poster presentation Prizes from undergraduate students projects and experiential learning. Also, a lifetime member of IEEE, ICPSCE, IAENG and IFERP. I am actively participating in Boards of Studies (BoS), Boards of Examination (BoE) and academic evaluation roles across universities and has organized and attended numerous Faculty Development Programs (FDPs), workshops and training programs, particularly on Cybersecurity, IoT, Cryptography, Networking, Outcome-Based Education and Research Methodologies.

**Qualification: Ph.D. (Computer Science and Engineering from VTU, Belagavi),  
M.Tech. (Software Engineering from SJCE, Mysuru),  
B.E. (Computer Science and Engineering from Malnad college of  
Engineering, Hassan)**

**Courses Taught:** Computer Network and Security, Wireless Communications, Cryptography and Network Security, Data Communications, Software Engineering and Project management and Mobile Networks.

**Publications:**

1. Swamy, L. N., Yogesha, T., **Usha, M. S.**, P. V., Prakruthi, P., Patil, H., Banu, R. and Rakshitha, N. M. (2026): "Integration of Drone Imaging and GIS Tools for Livestock Population Monitoring in Pastoral Systems", *SN Computer Science*, 5(7), 808.
2. Thimmaraju, S. N., Yogesha, T., Harsha, S. and **Usha, M. S.** (2025): "Portable Lexicon Management System for Mobile Ad-Hoc Networks", Indian Patent Applications, 202541005497.
3. **Usha, M. S.**, Navyashree and Pratheek Raj Urs, C. P. (2024): "AI Based Ayurvedic Plant Divination", *Indian Journal of Natural Sciences*, 15(83), 6.
4. Mouneshachari, S. M. Nejakar, Gopinath, S. M. and **Usha, M. S.** (2023): "Economical Third Umpire for Cricket", Indian Patent Application, 202341002993.
5. Disha, G. U., Dharthi Gowda, H. S., Priya, J., Srushti, H. S. and **Usha, M. S.** (2023): "Blockchain-Based Traceability System for Readymade Food Products", *Recent Trends in Computational Sciences*, 115-120.
6. **Usha, M. S.**, Ananya, B. S., Kaveri, Y. K. and Harshitha, S. (2022): "Air Pollution Prediction and Alert System Using IOT and Machine Learning", *International Journal of Current Science*, 12(3), 8.
7. Mouneshachari, Venkatesh and **Usha, M. S.** (2023): "Cost Effective Sewerage Blocking Monitoring using Image Processing and Internet of Things", Indian Patent Application, 202341025353.
8. **Usha, M. S.** and Ravishankar, K. C. (2020): "A Strategic Approach to Detect and Isolate Duplicitous Offence (DIDO) Using Enhanced AODV in MANET", *Solid State Technology*, 63(5), 8126-8139.
9. **Usha, M. S.** and Dr. Ravishankar, K. C. (2021): "Implementation of Trust-Based Novel Approach for Security Enhancements in MANETs", *SN Computer Science*, 2(4), 257.
10. **Usha, M. S.** and Ravishankar, K. C. (2020): "Key Distribution Approach to Mitigate Passive Attacks in MANET", *Indian Journal of Computer Science and Engineering (IJCSE)*, 11(6), 819-824.
11. **Usha, M. S.** and Ravishankar, K. C. (2020): "Dynamic Secured Routing Approach to Create Trustworthy Environment by Dealing with MANET Concurrent Attacks", *Solid State Technology*, 63(5), 7060-7068.
12. Yashwanth, K. R., Sunay, M. N., Srinivas, S., Abhishek Rao and **Usha, M. S.** (2019): "STIP Based Activity Recognition", *International Journal of Engineering Research & Technology (IJERT)*, 8(11), 6.
13. Latif, A. S., Raja Sagar, R., Datta, S. N. S., Sachin, H. S. and **Usha, M. S.** (2015): "Street Light Monitoring and Control System", *International Journal of Engineering and Techniques*, 1(2), 1-4.

14. Sachin, K. R. and **Usha, M. S.** (2015): “Approach to Mitigate DOS & DDOS Attacks in the Presence of Clock Drifts-Survey”, *International Journal of Engineering Development and Research*, 3(2), 8.
15. Sachin, K. R., Nikhil, S., Nisarga, C., Apeksha and **Usha, M. S.** (2015): “A Review of Hybrid ARQ in 4G LTE”, *International Journal of Advanced Research, Innovative Ideas in Education*, 1(3), 160-165.
16. Apeksha, S. K. and **Usha, M. S.** (2015): “An Overview of RLC Layer In 4G LTE”, *International Journal of Engineering Development and Research*, 3(2), 5.

#### **Conference Proceedings:**

1. **Usha.M.S.**, G. Tharun., Srinivasa P.C., Yogesha, T. and Swamy, L. N. (2025): “Revolutionizing Agriculture: AI and IoT in Hydroponic Farming”, 3rd International Conference on Application of Artificial Intelligence and Internet of Things in Management, Science and Technology organized by Indian Academicians and Researchers Association, 15th June 2025.
2. **Usha.M.S.**, Navyashree and Pratheek Raj Urs, C. P. (2023): “AI Based Ayurvedic Plant Divination”, National Conference at Christ College Bangalore, IJONS, 15th November 2023.
3. **Usha.M.S.** (2021): “Intelligent Data Communication Technologies and Internet of Things”, ICICI Dec/14-15/2020-21 organized by Springer International Conference, 2020-21.
4. Yashwanth, K.R., Sunay, M. N., Srinivas, S., Rao, A. and **Usha.M. S.** (2020): “STIP Based Activity Recognition”, National Level Student Technical Paper Presentation organized by IETE, 21st June 2020.

#### **Other achievements:**

##### **Patents Registered:**

1. Thimmaraju, S. N., Yogesha, T., Harsha, S., Sandeep, S., Pattar, A. B. and **Usha.M. S.** (2025): “Portable Lexicon Management System For Mobile Ad-Hoc Networks”, *Indian Patent Application*, 202541005497, Filed: January 22, 2025; Published: January 23, 2025.
2. Mouneshachari, Venkatesh and **Usha.M. S.** (2023): “Cost Effective Sewerage Blocking Monitoring Using Image Processing and Internet of Things”, *Indian Patent Application*, 202341025353, Filed: April 3, 2023; Published: April 22, 2023.
3. Mouneshachari, Nejakar, S. M., Gopinath, S. M. and **Usha. M. S.** (2023): “Economical Third Umpire for Cricket”, *Indian Patent Application*, 202341002993, Filed: January 14, 2023; Published: January 20, 2023.

#### **Roles and Responsibilities:**

Sl. No.	Name of the Position	No. of Years	From	To	Institution/University
1	<b>Head of the Department</b>	<b>27</b>	1995 2011 2017 2020	2008 2016 2019 2025	VVIET, Mysuru NIEIT, Mysuru NIEIT, Mysuru NIEIT, Mysuru
2	<b>Senior Lecturer</b>	<b>10</b>	1995	2005	VVIET, Mysuru
3	<b>Assistant Professor</b>	<b>9</b>	2005 2008 2011	2008 2011 2014	VVIET, Mysuru NMAMIT, Nitte NIEIT, Mysuru
4	<b>Associate Professor</b>	<b>10.10</b>	2014	2025	NIEIT, Mysuru
5	<b>Associate Professor</b>	<b>0.8</b>	2025	Till date	NIE, NORTH, Mysuru

**Memberships and Assignments:**

Sl. No.	Nature of Assignment as BOE/BOS/OTHERS	Institution/University where Assignment taken
01	BoS, BoE	NMAMIT, Karkala
02	BoS, BoE	SJCE, Mysuru
03	BoE	MIT, Mysuru
04	BoE	PESCE, Mysuru
05	BoE	NIE
06	Jury	VVCE
07	Conference Chair	VVCE
08	IEEE Member	IEEE
09	ICPSCE	IMRF Institute of Higher Education & Research

10	IAENG	International Association of Engineers
11	IFERP	IFERP

### Honors/Awards/Distinction Received

Sl. No.	Details of Honors/Awards/Distinction Received	Conferring Agency
01	International Academic Leadership Award - 2025	ICPSCE, Vijayawada, India
02	Best Paper Award	GSSSIETW, Mysuru, ICICI Springer 2020
03	Reviewer	IJECS- SCOPUS, CRC-2024, CCIP-2024, CGI-2024
04	Jury, Conference Chair, Resource person	JSSAHER, GSSSIETW, Mysuru, INTERNATIONAL and NATIONAL CONFERENCES
05	Best Paper Award	NMAMIT, Nitte, Karkala, Udupi District

### Project Grants:

Sl. No.	Title Name	Agency	Year	Amount
1	Dynamic traffic density analysis and green corridor lane clearance for emergency vehicles.	KSCST	2023	4000/-
2	Street Light Monitoring and Control Systems	KSCST	2015	5000/-
3	A hybrid ARQ in 4G LTE	KSCST	2015	5000/-

### Research Supervisor:

Research Supervisor Name	Candidate Name	Department	Research Centre
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DR. USHA M S	HARSHITHA H S	COMPUTER SCIENCE AND ENGINEERING	THE NATIONAL INSTITUTE OF ENGINEERING, MYSORE
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**Project Supervisor:**

No. of students Guided: UG – 210 Batches (Completed), M.C.A – 25 Batches and M. Tech- 2 batches