



Name: Dr. Amrita Mohan

Designation: Associate Professor

Department: CSE

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Qualifications: B.TECH, M.TECH, Ph.D

Experience: 7.5 Years (approx.)

**Area of Interest: Image processing using deep learning,
disaster monitoring and early warning system design,**

Publication: 11

Patent: --

Sponsored Projects: --

Consultancy: --

Curriculum vitae

Dr. Amrita Mohan

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Sunderpur, Nevada, Varanasi-221005, UP, India

Education:

- i. Ph.D. (2022), Motilal Nehru National Institute of Technology (MNNIT) Allahabad, Prayagraj-211004, UP, India.

Topic: Deep Learning-based Landslide Detection and Secure Transmission Using Crowdsourced Images
- ii. M. Tech (2013). Computer Science and Engineering- (*I Div.*), Sharda University, Greater Noida-201306, UP, India.

Topic: Performance Evaluation Study on Routing Protocols in MANET
- iii. B. Tech (2011). Computer Science and Engineering-(*I Div.*), U. P Technical University, Lucknow, UP, India.

Areas of Research Interest:

- Image Processing
- Deep Learning Techniques for Disaster Monitoring
- IoT Applications

Current Position:

- Assistant Professor, Department of Computer Science & Engineering at Ashoka Institute of Technology and Management, Varanasi, UP, India.

Teaching & Experience:

- Assistant Professor, Department of Computer Science and Engineering (30th January, 2014 - 23rd June, 2016), Geeta Institute of Management & Technology, Kanipla, Kurukshetra-136119, Haryana, India.
- Assistant Professor, Department of Computer Science and Engineering (9th August 2016- 17th July, 2017), G. L. Bajaj Institute of Management and Technology, Greater Noida- 201306, UP, India

- Junior Research Fellow (JRF), Motilal Nehru National Institute of Technology (MNNIT) Allahabad, in Natural Resources Data Management System (NRDMS), Department of Science & Technology (DST) Sponsored Project titled ‘Landslide Inventory Preparation using Multi-Temporal SAR Interferometry (InSAR)’, from July 2017 to March 2019.

Courses Taught:

B. Tech. Level:

- Computer Networks
- Computer Organization & Architecture
- Web Technology
- Internet Fundamentals
- Mobile Computing

M. Tech. Level:

- High Performance Networks
- Introduction to Web Technology.

Research Publications:

Journal

1. A. Mohan, A. Anand, A. K. Singh, R. Dwivedi, and B. Kumar, “Selective encryption and optimization based watermarking for robust transmission of landslide images,” *Computers & Electrical Engineering* Volume 95, October 2021, 107385, ELSEVIER Aug 24, 2021, doi: 10.1016/j.compeleceng.2021.107385 (**IF= 3.818**).
2. S. Ullo, A.Mohan *et al.*, “A New Mask R-CNN-Based Method for Improved Landslide Detection,” *IEEE Journal of Selected Topics in Applied Earth Observation and Remote Sensing*, VOL. 14, 2021, doi: 10.1109/JSTARS.2021.3064981 (**IF=3.784**).
3. A. Mohan, A. K. Singh, B. Kumar, and R. Dwivedi, “Review on remote sensing methods for landslide detection using machine and deep learning,” *Transactions on Emerging Telecommunication Technologies*, vol. 32, no. 7, 2021, John Wiley & Sons. doi: 10.1002/ett.3998 (**IF=2.638**).
4. A. Mohan, Aprajita Naiwal, “Performance Evaluation of On demand Protocols For MANET” Vol 4, Issue 2, May 2013 ISSN (Online): 2229-6166 *International Journal of Computing and Business Research*.

Conferences:

1. Mohan, A., Dwivedi, R., Kumar, B. (2022). Image Restoration of Landslide Photographs Using SRCNN. In: Dhawan, A., Tripathi, V.S., Arya, K.V., Naik, K. (eds) *Recent Trends in Electronics and Communication*. Lecture Notes in Electrical

Engineering, vol 777. Springer, Singapore. https://doi.org/10.1007/978-981-16-2761-3_108

2. H. Sharma, A. Mohan, and J. Kumar, "Time Management" Proceedings of International Conference on Emerging Trends in Engineering & Technology (IETET), Greenze Scientific Society.
3. Pathak, S., Kumar, M., Mohan, A., & Kumar, B. (2015). Energy Optimization of ZigBee Based WBAN for Patient Monitoring. *Procedia Computer Science, Elsevier 70*, 414-420.
4. Priyanka, Amrita Mohan, Kedar Nath Singh and Amit Kumar Singh, D2StegE: Using Decteron2 to Segment Medical Image with Security Through Steganography and Encryption. CICBA 2024, (**Communicated**), Springer.
5. Nitesh Kumar Yadav, Amrita Mohan, Om Prakash Singh and Amit Kumar Singh, Digital Images Encryption using PWLCM and Sine Map, CICBA 2024, (**Communicated**), Springer.

Book Chapters:

1. Mohan, A., Dwivedi, R., Kumar, B. "IoT for Landslides: Applications, Technologies and Challenges" AI/ML in Smart Communication, 5G and Beyond.
2. Singh, P., Gupta, S., Sejwal, L., Mohan, A. (2018). Power Issues of MANET. In: Mishra, D., Azar, A., Joshi, A. (eds) Information and Communication Technology. Advances in Intelligent Systems and Computing, vol 625. Springer, Singapore. https://doi.org/10.1007/978-981-10-5508-9_11

Certifications:

1. Certification of "Neural Network and Deep Learning", online course by deeplearning.ai, Coursera.
2. Certification of "Introduction to Artificial Intelligence" online Course by IBM, 2020.
3. Certification of "Introduction to GIS Mapping", Course Era, online course by University of Toronto, Coursera.
4. Certification of "Programming for Everybody (Getting Started with Python)", online course by University of Michigan, Coursera.
5. Certification of "Understanding Research Methods", online course by University of London, Coursera.
6. Certification of "Python Programming Essential", online course by Rice University, Coursera.

Projects Completed: 05

- NS 2 Simulation and Performance Evaluation of MANETs Routing Protocols, Sharda University, Greater Noida, UP.
- Weigh Bridge Automation System, College of Engineering & Technology, Moradabad
- Design of user level thread package using C, C-DOT, New Delhi
- Student record system using Visual Basic, College of Engineering & Technology, Moradabad
- Shuffle Game using C, College of Engineering & Technology, Moradabad.

Projects Supervised: 06

- Library Management System.
- Implementation of Web Site Shopping/College.
- Implementation of Web Server.
- Chat Server.
- Bluetooth Home Automation.
- Firewall Implementation.

Webinars Attended:

1. Participated in “Case Study & Industry Applications in Data Science” held on 25th September, 2023 by CDAC, Noida
2. Participated in the John Wiley and Sons research webinar on the topic ‘Publishing Research When English is Your Second Language’
3. Attended ‘Basic Series’ of the web of science training and certification program 2020, organized by clarivate, Web of Science

Workshops Attended: 04

- One day awareness workshop training program on Advances in Geospatial Technique for Disaster Mitigation sponsored under ISRO Disaster Management Support Capacity Building (DMS-CB) Program, organized by MNNIT Allahabad, Prayagraj on 31st October 2023.
- Short term Induction Training Program through ICT conducted by NITTTR Chandigarh at Geeta Institute of Management & Technology, Kanipla, Kurukshetra-136119.
- Bluemix Enablement Session conducted by IBM at Geeta Institute of Management & Technology, Kanipla, Kurukshetra-136119.
- Computer Networking with CCNA through ICT conducted by NITTTR Chandigarh at Geeta Institute of Management & Technology, Kanipla, Kurukshetra-136119.

Reviewer for Journals/Conferences

1. International Society for Photogrammetry and Remote Sensing (ISPRS), XXIV ISPRS Congress, Scheduled on June 6-11, 2022, Nice, France.
2. Journal of Advances in Computational Intelligence (ADCI), Springer
3. International Journal of Information Technology and Decision Making (IJITDM)
4. Journal of Sensors, Hindawi
5. Defense Science Journal, DRDO
6. Natural Hazards, Springer Nature
7. Scientific Reports, Springer Nature
8. International Journal of Digital Earth, Taylor & Francis
9. Geomatics, Natural Hazard and Risk, Taylor & Francis
10. Journal of Autonomous Intelligence, Frontier Scientific Publishing

Additional Academic Responsibilities

1. Member, Research and Development Cell at Ashoka Institute of Technology and Management, Varanasi, 5th May 2023 to till date.
2. IoT lab in charge at Ashoka Institute of Technology and Management, Varanasi from 21st April to till date.
3. Member, organizing committee, 5-days online FDP on “Recent Trends in Computation, Data Processing and Security” from 30th January to 3rd February 2023 organized by Computer Science & Engineering Department at Ashoka Institute of Technology and Management, Varanasi.
4. Co-coordinator, Personality Development Program (PDP) at Geeta Institute of Management & Technology (GIMT), Kanipla, Kurukshetra, Haryana, India.

Invited Talk in Conference/Webinar

1. Delivered invited talk on “Harnessing IoT for Disaster Monitoring and Response” at 2nd International Meet & Expo on Robot Intelligence Technology and Applications (ROBOTMEET2023) Webinar held on August 18, 2023
2. Delivered invited talk on “Deep learning for landslide detection” in Aerospace & Aeronautics Research Conference 2023 Hampton by Hilton Rome North Fiano Romano, Rome Italy.

Chair in Conference

Session chair in 2023 IEEE World Conference on Applied Intelligence and Computing (AIC 2023), jointly organized by REC, Sonbhadra and Ashoka Institute of Technology and Management, Varanasi from 29th to 30th July 2023.

Technical Program Committee Member

TPC member in upcoming 1st International Conference on Innovative Engineering Sciences & Technological Research, 2024.

Professional Skills:

- Comprehensive problem solving, algorithm design and development, excellent verbal and written communication skills, quest for learning and ability to work independently or in a team with full dedication and sincerity.
- Practical skills such as building and using database management systems and other sophisticated software tools.
- Using existing software libraries to carry out a variety of computing tasks, such as creating a user interface.

Personal Skills:

- Capable of capturing student's interest in learning by providing them Training Support and Guidance.
- Identified student's individualism and developed curriculum to accommodate different learning styles, maximizing student's comprehension.
- Maintained productive learning environment by stating classroom rules, holding students accountable for their actions, and implementing consistent and fair consequences.
- Established comfortable, student centric, two-way communication that empowering them to enjoy learning process.
- Energetic self starter with strong communication skills works well independently or on a team.

Date: 8/11/2023

(Amrita Mohan)