

## **Dr. Mushtaq Ahmed**

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Senior MIEEE, Senior Member IACSIT,  
Member iSIGCSE ACM, Member IAENG,  
Member AAAI



### **OFFICIAL ADDRESS:**

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### **BRIEF RESEARCH PROFILE:**

Dr Mushtaq Ahmed is presently working as an Associate Professor in the Department of Computer Science and Engineering at Malaviya National Institute of Technology Jaipur, Rajasthan, India. He has more than 25 years of teaching experience in MNIT. His research domain includes Network-on-Chip, Embedded Systems, Blockchain technology, IoT, Cloud Computing, Wireless Sensor Networks, Fault-Tolerant Systems, and High-speed Overlay Networking. He has published more than eighty papers in various International Journals and Conferences. He is a PI/Co-Pi in three research projects, one international patent, and one Indian patent. He has successfully guided six PhDs and twenty one PG research scholars and currently supervising seven PhDs. He is a Member of the Board of Studies of Gujarat Technological University, board of Studies member of Amity University, Jaipur and member of the "Research Board" of UEM Jaipur. He is a Fellow IE(India), Life Member of ACM, Life member of ISTE, Life Member of ACCS, Member IEEE, and Member IEANG.

### **RESEARCH INTERESTS:**

Network on Chip , Computer Networks, Embedded Systems, Multi-Core And Cloud Computing, Wireless Sensor Networks, Fault Tolerant Systems, High Speed Overlay Networking.

### **TEACHING:**

- CPT601-Topics in Algorithms (PG Course)
- CST450-Wireless Sensor Networks (PG/UG Course)
- CST307-Computer Networks (UG Course)

- CSP205-Digital Logic Design (UG Course)
- CST304-Embedded Systems (UG Course)
- CST301-Computer Architecture (UG Course)
- CST302-Operating System (UG Course)
- CST434-Parallel and Distributed Computing (UG Course)

#### **VISITING FACULTY:**

- In Indian Institute of Information Technology, Kota (IIIT, Kota) in the Year 2021 & 2022.

#### **Awards & Honours:**

- Excellence in Education 2023 for Outstanding services in the field of Education and invaluable Contribution to the Society at large given by Association of Muslim Professional(AMP) Year-2023.

#### **Ph.D. GUIDANCE:**

##### **THESIS AWARDED : 06**

- Awarded to Dr. Jitendra Goyal (ID: 2018RCP9080) on the topic "A Secure Framework for IoT Using Blockchain Technology" on April 16<sup>th</sup>, 2024.
- Awarded to Dr. Diwakar Gautam (ID: 2013RCP9003) on the topic "Early Stage Detection and Classification of Melanoma" on June 01<sup>st</sup>, 2021.
- Awarded to Dr. Maninder Singh Nehra (ID: 2013RCP9553) on the topic "Design And Development Of Devenagri Script Handwritten Text Corpus With Annotation" on December 23<sup>rd</sup>, 2019.
- Awarded to Dr. Kunwar Pal (ID: 2013RCP9568) on the topic "Quality Aware Adaptive Live Video Streaming in Peer-to-Peer Network" on October 15<sup>th</sup>, 2018.
- Awarded to Dr. Maroti Deshmukh (ID: 2014RCP9539) on the topic "Secret Sharing Schemes for Multimedia Data" April 04<sup>th</sup>, 2018.
- Awarded to Dr. Tapas Badal (ID: 2013RCP9004) on the topic "Non-Chronological Video Synopsis and Indexing" on March 12<sup>th</sup>, 2018.

##### **CURRENT Ph.D. STUDENTS: 07**

- Idris Afzal Shah (ID: 2019RCP9183): Optimized Routing Strategies for Performance Enhancement in Delay Tolerant and Wireless Sensor Networks (Submitted).
- Sanjay Tehariya (ID: 2018RCP9160): Performance optimization of live video streaming over peer-to-peer overlay networks.

- Akash Yadav (ID: 2019RCP9150): Improving loop parallelism in automatic parallelizing compilers.
- Pravesh Bansal (ID: 2019RCP9557): Student behaviour analysis using machine learning.
- Madhav Khatri (ID: 2022RCP9027): Cloud Load Balancing and Security
- Ravindra Singh (ID: 2022RCP9520): Performance analysis of on-chip interconnected networks.
- Gaurav Kumar Das (ID: 2023RCP9025): AI and ML for Medical Image processing.

#### **MEMBERS OF BODIES OUTSIDE MNIT:**

- Member of Board of Studies for Computer and its allied branches from 27th July 2021 for three years of Gujarat Technological University
- Member of board of Studies Amity Institute of Information Technology, Amity University Jaipur from 12 December 2020
- Members-of-academic-council, Global Institute of Technology, Jaipur since 2019
- Member board of Studies, Mewar University, 28 Nov. 2016
- Expert for reviewing the procurement plan of the Engineering Colleges of Rajasthan under TEQIP III, 27th NOV, 2019 to 8th FEB, 2021
- Member of SRDC (School Research Development Committee), Amity University Jaipur since 11th September 2018
- Member of DRC/ RDC committee for Computer Science and Engineering of Dr K.N. Modi University 17 June 2020
- Member of "Research Board" of University of Engineering and Management Jaipur from April 29 2021
- Member of Review Board of Subodh Journal of Recent Trends in Information Technology (ISSN NO. 0975- 9875) Publish by: S.S. Jain Subodh P.G. (Autonomous) College, Jaipur

#### **MEMBERSHIP OF PROFESSIONAL SOCIETIES:**

- Fellow of IE (India) (F-1291269)
- Lifetime Member ACM (4558049)
- Life Member of Advanced Computing and Communication Society(ACCS) (L00A23123726)
- Life Member of Indian Society for Technical Education (ISTE) (LM135348)
- Senior Member of IEEE (94246290)

- Member of Association for the Advancement of Artificial Intelligence (AAAI) (87490)
- Member of International Association of Engineers (IAENG) (143488)

#### **PATENTS:**

- "Blockchain And Iot Based Electronics Health Record Device", Jitendra Goyal, Mushtaq Ahmed, Dinesh Gopalani, Aditi Sharma, Akash Yadav , Reg.No. 121444 [THE PATENT OFFICE, GOVERNMENT OF INDIA] awarded on Dt.23-12-2022
- "Trusted and secure configuration and validation of data for public IoT devices using blockchain technology", Dumka, Ankur; Ashok, Alaknanda; ; Ahmed, Mushtaq et.al. , Reg.No. 2020103294 [IP Australia (Australian Govt.)] Patent Granted: Dt.23-02-2020

#### **RESEARCH PROJECTS:**

- "Empower Rural Medical Services Using a Computer Aided Cancer Diagnostic Deep Learning Model for Oral" Sponsored by NPIU, MHRD, Govt. of India, Mr. Diwakar Gautam, Dr. Mushtaq Ahmed & Dr. Deepak Jhanwar.
- "Urdu Corpus Development and Handwritten Text Recognition", Sponsored by DST, Govt. of Rajasthan, Dr. Neeta Nain(PI) & Dr. Mushtaq Ahmed.

#### **PUBLICATIONS - INTERNATIONAL JOURNALS (SCI / SCI-E/Scopus):**

- Aga Basit Iqbal, Idris Afzal Shah, Injila, Assif Assad, Mushtaq Ahmed, and Syed Zubair Shah, "A Review of Deep Learning Algorithms for Modeling Drug Interactions" , Multimedia Systems (Springer ) Volume :30/45/2024,DOI: 10.1007/s00530-024-01325-9
- Mushtaq Ahmed, Bhavna Ambudkar, Akash Yadav, "Efficient Power Estimation for 3D-Mesh Optic Communication Network" , Ingenierie Des Systemes D-Information (Scopus) (International Information and Engineering Technology Association) Volume :29/27-34/2023, DOI: <https://doi.org/10.18280/isi.290104>
- Yadav, A., Ahmed, M., Ambudkar, B., Kumar, D. (2023). An energy-efficient routing protocol for a modified Fat-Tree topology in system-on-chip design. Mathematical Modelling of Engineering Problems, Vol. 10, No. 6, pp. 2149-2157. <https://doi.org/10.18280/mmep.100627>
- Akash Yadav, Mushtaq Ahmed, "Performance Analysis of Parallel Implementations of Global Sequence Alignment Methods for DNA Sequencing", (Accepted)International Journal of Computing and Digital Systems (Elsevier) Volume:14 / 05 / 2023 DOI: <http://dx.doi.org/10.12785/ijcds/140119>

- Idris Shah, Mushtaq Ahmed, "Fuzzy K-Means Clustering Routing Algorithm for Load Balancing in Wireless Sensor Networks", *Wireless Personal Communications (Springer)* Volume:28 / 13 / 2023  
DOI: <https://doi.org/10.1007/s11277-023-10320-8>
- Idris Shah, Mushtaq Ahmed, Ragavendra Singh, "Pentago SnW: An improved Spray and Wait protocol for Delay Tolerant Wireless Sensor Networks", (Accepted) *China Communications (IEEE)* Volume:20 / / 2023  
DOI: tba
- Jitendra Goyal, Mushtaq Ahmed, Dinesh Gopalani, Neelu Pandey, Faisal Ahmed, "An Efficient Fuzzy-Based Vaccine Distribution Using Blockchain Technology", (Accepted) *International Journal of Computing and Digital Systems (Elsevier)* Volume:14 / 8 / 2023 DOI: <http://dx.doi.org/10.12785/ijcds/140140>
- Ansari, S.A., Pal, K., Govil, M.C. Ahmed, A. et al. Score-based Incentive Mechanism (SIM) for live multimedia streaming in peer-to-peer network. *Multimed Tools Appl* 80, 19263–19290 (2021).  
<https://doi.org/10.1007/s11042-021-10709-2>
- Kunwar Pal, Mahesh Chandra Govil, Mushtaq Ahmed "FLHyO: fuzzy logic based hybrid overlay for P2P live video streaming" *Multimedia Tools and Applications* Volume :78 / 33679-3370 / 2019 (Springer US).  
<https://doi.org/10.1007/s11042-019-08010-4>
- Maroti Deshmukh, Neeta Nain, Mushtaq Ahmed "Secret sharing scheme based on binary trees and Boolean operation" *Knowledge and Information Systems* Volume :60 / 1377-1396 / 2019  
<https://doi.org/10.1007/s10115-018-1268-9>
- Maroti Deshmukh, Neeta Nain, Mushtaq Ahmed "Efficient and secure multi secret sharing schemes based on boolean XOR and arithmetic modulo" *Multimedia Tools and Applications* Volume :77 / 89-107 / 2018 (Springer US).  
<https://doi.org/10.1007/s11042-016-4229-x>
- Kunwar Pal, Mahesh Chandra Govil, Mushtaq Ahmed "Priority-based scheduling scheme for live video streaming in peer-to-peer network" *Multimedia Tools and Applications* Volume :77 / 24427-2445 / 2018 (Springer US).  
<https://doi.org/10.1007/s11042-018-5741-y>
- Mohit Rajput, Maroti Deshmukh, Neeta Nain, Mushtaq Ahmed "Securing data through steganography and secret sharing schemes: trapping and misleading potential attackers" *IEEE Consumer Electronics Magazine* Volume :7 / 40-45 / 2018 (IEEE)  
<https://doi.org/10.1109/MCE.2017.2716412>
- Diwakar Gautam, Mushtaq Ahmed, Yogesh Kumar Meena, Ahtesham Ul Haq "Machine learning-based diagnosis of melanoma using macro images" *International journal for numerical methods in biomedical engineering* Volume :34 / 2953 / 2018 (Wiley Online library).  
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- Kunwar Pal, Mahesh Chandra Govil, Mushtaq Ahmed "Slack time-based scheduling scheme for live video streaming in P2P network" International Journal of Communication Systems Volume :31 / 3440 / 2018 (Wiley Online Library )  
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- Tapas Badal, Neeta Nain, Mushtaq Ahmed "Online multi-object tracking: multiple instance based target appearance model" Multimedia Tools and Applications Volume :77 / 25199-2522 / 2018 (Springer US).  
<https://doi.org/10.1007/s11042-018-5781-3>
- Deshmukh, M., Nain, N., Ahmed, M. "A novel approach for sharing multiple color images by employing Chinese Remainder Theorem" Journal of Visual Communication and Image Representation Volume :49 / 291 - 302 / 2017 (Elsevier )  
<https://doi.org/10.1016/j.jvcir.2017.09.013>
- K. Pal, M. C. Govil , Mushtaq Ahmed "Comparative Analysis of Utilization Based Hybrid Overlay for Live Video Streaming in P2P Network" International Journal of Intelligent Engineering and Systems Volume :10/ 263-271 / 2017 (IJIES)  
<http://www.inass.org/2017/2017063030.pdf>
- Maroti Deshmukh, Neeta Nain, Mushtaq Ahmed "Efficient and secure multi secret sharing schemes based on Boolean XOR and arithmetic modulo" Multimedia Tools and Applications Volume :75 / 1-19 / 2016 ISBN: 1380-7501 (Springer)  
<https://doi.org/10.1109/AINA.2016.56>
- Prakash C, N, Nain, Mushtaq Ahmed "A Structure for Annotation and Ground-truthing of Urdu Handwritten Text Image Corpus" Procedia - Social and Behavioural Sciences- Science Direct Volume :198 / 84-88 / 2015 (Elsevier).  
<https://doi.org/10.1016/j.sbspro.2015.07.422>
- Ravindra Kumar Saini, Mushtaq Ahmed "2D Hexagonal Mesh Vs 3D Mesh Network on Chip: A Performance Evaluation" International Journal of Computing and Digital Systems Volume :4 / 33-41 / 2015 ISBN: 2210-142X (IJCDS)  
<http://dx.doi.org/10.12785/IJCDS/040104>
- Deepa, M., Maninder, N., Neeta, N., & Mushtaq, A. (2015). A Survey of Techniques for Two Level Corpus Annotation for Hindi. Int. Bull. Math. Res, 2, 194-206.  
<http://journalibmr.org/images/IBMR020118.pdf>
- Mushtaq Ahmed, V. Laxmi, M. S. Gaur "Performance Analysis of Minimal Path Fault-Tolerant Routing in NoC" Journal of Electronics (China) Volume:28 / 587-595 / 2011 ISBN: 0217-9822 (Springer)  
<https://doi.org/10.1007/s11767-012-0701-6>

**PUBLICATIONS - INTERNATIONAL CONFERENCES**  
**(SCI/Scopus)**

- Idris Afzal Shah, Mushtaq Ahmed, "A Novel Delay Tolerant Routing Protocol for Opportunistic Networks Accepted" , 9th International Conference for Convergence in Technology (I2CT-2024), Lonavala Pune // 2024
- Pravesh Bansal, Mushtaq Ahmed, "Fuzzy Logic-Based Analysis of Student Behavior Patterns in Educational Environments" , 4th International Conference on Innovation in IoT Robotics and Automation, MIT Moradabad India // 2024
- Jitendra Goyal, Mushtaq Ahmed, Dinesh Gopalani, "Cemetery Allocation Management System Using Ethereum Blockchain Accepted", 4th International Conference on Data Science and Applications ICDSA 2023 by: Springer at MNIT Jaipur India.
- M. Ahmed, M. Khatri, F. Ahmed and J. Goyal, "An Optimized Fuzzy-based Load Balancing in Cloud Computing," 2023 International Conference on Recent Advances in Electrical, Electronics & Digital Healthcare Technologies (REEDCON), New Delhi, India, 2023, pp. 323-328, DoI: 10.1109/REEDCON57544.2023.10150583.
- Akash Yadav, Mushtaq Ahmed, Alina Khan, "An Efficient Hybrid MPI-OpenMP Based Parallel Approach for Longest Common Subsequence", 27th Annual International Conference on Advanced Computing and Communications ADCOM 2022 Accepted by :ACCS at IITB, Bangalore / / 2023
- Sanjay Teheriya, Mushtaq Ahmed, "New Fuzzy Logic Based Hybrid Overlay NFLHyO in P2P Live Streaming" , 5th International Conference on Communication and Computational Technologies -ICCCT 2023 by :ICCCT 2023 at Rajasthan Institute of Engg. and Tech., Jaipur / / 2023
- Vijay Budania, Mushtaq Ahmed, "Deep Learning With Encoders for Intrusion Detection Systems - Awarded Best Paper" , International Conference on Emerging Computation Intelligence -ICECI 2023 by :ICECI 2023 at AMU Aligarh, UP // 2023
- Pravesh Bansal, Musthaq Ahmed, "An Expert System for Analyzing the Behavior of Students in the Higher Education - Awarded Best Paper" , International Conference on Emerging Computation Intelligence -ICECI 2023 by :ICECI 2023 at AMU Aligarh, UP / / 2023
- Jitendra Goyal, Deeksha Ratnawat, Mushtaq Ahmed, Dinesh Gopalani , "Simulation and Synthesis of SHA-256 Using Verilog HDL for Blockchain Applications", Advances in Data-Driven Computing and Intelligent Systems ADCIS 2022 by :Springer Nature Singapore at Goa, India / 463-477 / 2022 ISBN: 978-981-99-0980-3
- Sagar, S., Ahmed, M., Husain, M.Y. (2022). Fuzzy Randomized Load Balancing for Cloud Computing. In: Barolli, L. (eds) Advances on P2P, Parallel, Grid, Cloud and Internet Computing. 3PGCIC 2021. Lecture

Notes in Networks and Systems, vol 343. Springer, Cham.  
[https://doi.org/10.1007/978-3-030-89899-1\\_3](https://doi.org/10.1007/978-3-030-89899-1_3)

- J. Goyal, M. Ahmed and D. Gopalani, "Empirical Study of Standard Elliptic Curve Domain Parameters for IoT Devices," 2021 International Conference on Electrical, Communication, and Computer Engineering (ICECCE), 2021, pp. 1-6,  
<https://doi.org/10.1109/ICECCE52056.2021.9514179>
- Akash Yadav, Mushtaq Ahmed and Daitule Omkar Vilas , "Exploiting Processor Variability for Efficient Application Mapping" International Conference on Intelligent Computing and Networking by Springer Singapore at Mumbai / 1-9 / 2020.  
[https://doi.org/10.1007/978-981-15-7421-4\\_1](https://doi.org/10.1007/978-981-15-7421-4_1)
- Anjali Saini, Mushtaq Ahmed, Kartikey Sharma , "Detection of Suspicious Activity in ATM Booth" International Conference on Intelligent Computing Techniques for Smart Energy Systems by Springer Singapore at Jaipur / 911-925 / 2020  
[https://doi.org/10.1007/978-981-15-0214-9\\_97](https://doi.org/10.1007/978-981-15-0214-9_97)
- Kunwar Pal, MC Govil, Mushtaq Ahmed , "Utilization-Based Hybrid Overlay for Live Video Streaming in P2P Network" Recent Findings in Intelligent Computing Techniques. Advances in Intelligent Systems and Computing by Springer, Singapore at Goa / 331-338 / 2019.  
[https://doi.org/10.1007/978-981-10-8639-7\\_34](https://doi.org/10.1007/978-981-10-8639-7_34)
- Maninder Singh Nehra, Neeta Nain, Mushtaq Ahmed, Deepa Modi , "POS Tagging and Structural Annotation of Handwritten Text Image Corpus of Devnagari Script" International Conference on Emerging Technologies in Computer Engineering by Springer, Singapore at Jaipur / 286-297 / 2019.  
<https://doi.org/10.1109/MENACOMM46666.2019.8988574>
- Mushtaq Ahmed, Saurabh Goyal, Siddhartha Singh, Jaiprakash Gupta , "An Improved Spray and Wait Routing Protocol for Delay Tolerant Network" 2019 2nd IEEE Middle East and North Africa COMMUNICATIONS Conference (MENACOMM) by IEEE at Manama, Bahrain, Bahrain / 1-6 / 2019.  
<https://doi.org/10.1109/MENACOMM46666.2019.8988574>
- Ravindra Kumar Saini, Mushtaq Ahmed , "Restricted Turn Model Fault Tolerant Routing Techniques for 3D Mesh Network-on-Chip: An Evaluation" International Congress on Information and Communication Technology by Springer, Singapore at Bangkok / 113-122 / 2018.  
[https://doi.org/10.1007/978-981-10-5508-9\\_10](https://doi.org/10.1007/978-981-10-5508-9_10)
- Tapas Badal, Neeta Nain and Mushtaq Ahmed , "Multi-Object Trajectory Coupling Using Online Target Specific Decision Making" 2017 IEEE International Conference on Identity, Security and Behavior Analysis (ISBA) by IEEE at New Delhi / 1-6 / 2017.  
<https://doi.org/10.1109/ISBA.2017.7947702>



- Mushtaq Ahmed, Pankaj Sharma, Kunwar Pal and Mohammed Yaseen Husain ,”Unicast Backtracking Route Recovery in ODMRP” 9th IEEE-GCC Conference and Exhibition by IEEE at Bahrain / / 2017  
<https://doi.org/10.1109/IEEEGCC.2017.8447973>
- Maroti Deshmukh, Neeta Nain, Mushtaq Ahmed ,”A Novel Approach of an (N, N) Multi-Secret Image Sharing Scheme Using Additive Modulo” Proceedings of International Conference on Computer Vision and Image Processing by Springer at IIT Roorkee / 149-158 / 2017.  
[https://doi.org/10.1007/978-981-10-2104-6\\_14](https://doi.org/10.1007/978-981-10-2104-6_14)
- T. Badal, N. Nain and M. Ahmed ,”Generalised Spatio Temporal Feature Based Important Activity Synopsis Generation” 13th International Conference on Signal-Image Technology & Internet-Based Systems (SITIS) by IEEE at Jaipur / 319-326 / 2017.  
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- Tapas Badal, Neeta Nain, Mushtaq Ahmed ,”Surveillance Video Synopsis While Preserving Object Motion Structure and Interaction” International Conference on Computer Vision and Image Processing ) Conference Held at IIT-Roorkee on 26-28 Feb 2016. by Springer at IIT-Roorkee on 26-28 Feb 2016. / 4-8 / 2016  
[https://doi.org/10.1007/978-981-10-2107-7\\_18](https://doi.org/10.1007/978-981-10-2107-7_18)
- Maninder Singh Nehra, Neeta Nain and Mushtaq Ahmed ,”Handwritten Devnagari Script Database Development for Off-Line Hindi Character With Matra (Modifiers)” Proceedings of the International Conference on Recent Cognizance in Wireless Communication & Image Processing by Springer at New Delhi / 233-240 / 2016.  
[https://doi.org/10.1007/978-81-322-2638-3\\_27](https://doi.org/10.1007/978-81-322-2638-3_27)
- Pal, K., Govil, M.C., Ahmed, M. (2018). Comparative Analysis of New Hybrid Approach for Overlay Construction in P2P Live Streaming. In: Shetty, N., Patnaik, L., Prasad, N., Nalini, N. (eds) Emerging Research in Computing, Information, Communication and Applications. ERCICA 2016. Springer, Singapore.  
[https://doi.org/10.1007/978-981-10-4741-1\\_22](https://doi.org/10.1007/978-981-10-4741-1_22)
- Maroti Deshmukh, Neeta Nain and Mushtaq Ahmed ,”Enhanced Modulo Based Multi Secret Image Sharing Scheme” International Conference on Information Systems Security by Springer at Jaipur / 212- 224 / 2016  
[https://doi.org/10.1007/978-3-319-49806-5\\_11](https://doi.org/10.1007/978-3-319-49806-5_11)
- Pal. K, Govil M.C, Ahmed M. ,”A New Hybrid Approach for Overlay Construction in P2P Live Streaming” International Conference on Advances in Computing, Communications and Informatics (ICACCI) by IEEE at Kochi / 431-437 / 2015  
<https://doi.org/10.1109/ICACCI.2015.7275647>
- Diwakar Gautam, Mushtaq Ahmed ,”Melanoma Detection and Classification Using SVM Based Decision Support System” 12th IEEE India International Conference (INDICON 2015) by IEEE at Jamia Millia Islamia,

New Delhi,2015

<https://doi.org/10.1109/INDICON.2015.7443447>

- Tapas Badal, Neeta Nain, Mushtaq Ahmed, Vishakha Sharma ,” An Adaptive Codebook Model for Change Detection With Dynamic Background” 11th IEEE International Conference on Signal Image Technology and Internet Based Systems by IEEE at Bangkok, Thailand / 110-116 / 2015  
<https://doi.org/10.1109/NCVPRIPG.2015.7490036>
- Tapas Badal, Neeta Nain and Mushtaq Ahmed ,” An Improved Multi-Layer Codebook Model to Eliminate Ghost Region Conference Paper · December 2015 With 8 Reads” Fifth National Conference on Computer Vision, Pattern Recognition, Image Processing and Graphics (NCVPRIPG) by IEEE at Patna / 1-4 / 2015  
<https://doi.org/10.1109/NCVPRIPG.2015.7490036>
- Maninder Nehra, Neeta Nain and Mushtaq Ahmed ,”Handwritten Devanagari Script Database Development for Offline Hindi Characters With Modifiers” International Conference on Recent Cognizance in Wireless Communication and Image Processing by Springer at Jaipur / 233-240 / 2015.  
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- Prakash Choudhary, Neeta Nain, and Mushtaq Ahmed ”A unified approach for development of Urdu Corpus for OCR and demographic purpose”, Proc. SPIE 9445, Seventh International Conference on Machine Vision (ICMV 2014), 944526 (14 February 2015);  
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- Tapas Badal, Neeta Nain, and Mushtaq Ahmed ,”Video Partitioning by Segmenting Moving Object Trajectories” The 7th International Conference on Machine Vision (ICMV 2014), Milan, Italy by SPIE at Milan, Italy / 5 / 2014  
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- Mushtaq Ahmed, Diwakar Gautam ,”Efficient Fuzzy Edge Detection Using Successive Otsu’s Method” International Conference on Convergence of Technology (I2CT) 2014 by IEEE at Pune, India / 5 / 2014  
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- Dipika Singh, Diwakar Gautam, Mushtaq Ahmed ,”Detection Techniques for Melanoma Diagnosis: A Performance Evaluation” International Conference on Signal Propagation and Computer Technology (ICSPCT) by IEEE at Ajmer / 567-572 / 2014  
<https://doi.org/10.1109/ICSPCT.2014.6884948>
- Sharda Godara, Neeta Nain and Mushtaq Ahmed ,”Handwritten Urdu Script Segmentation Using Hybrid Approach” ICVGIP 2014 - Workshop on Document Analysis and Recognition, DAR 2014 by ACM at IISC Bangalore / 204 - 208 / 2014
- Tapas Badal, Neeta Nain and Mushtaq Ahmed ,”Video Synopsis by Multi-Array Representation of Moving Objects” ICVGIP 2014 Workshop on

Applications in Computer Vision, Graphics and Image Processing. by ACM at IISC Bangalore / 200-204 / 2014

- Mushtaq Ahmed, Rakesh Kumar ,”Parameterized Path-Based, Randomized, Oblivious, Minimal Routing in 3D Mesh NoC ” IEEE Tencon 2012 by IEEE at Cebu, Philippines / 1-6 / 2012  
<https://doi.org/10.1109/TENCON.2012.6412341>
- Parvati Bhurani, Mushtaq Ahmed and Yogesh Kumar Meena ,”New Measure of Interestingness for Efficient Extraction of Association Rules” International Conference on Information Systems Design and Intelligent Application by Springer Berlin Heidelberg at Visakhapatnam, India / 103-110 / 2012  
[https://doi.org/10.1007/978-3-642-27443-5\\_12](https://doi.org/10.1007/978-3-642-27443-5_12)
- Mushtaq Ahmed, Vijay Laxmi, M. S. Gaur, Yogesh Meena ,”Parameterized Path Based Randomized Oblivious Minimal Path Routing With Fault Tolerance in 2D Mesh Network on Chip” 2nd International Congress on Computer Applications and Computational Science (CACs2011) by Springer-Verlag GmbH Berlin Heidelberg at Bali, Indonesia / 63-70 / 2011  
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- N. Rameshan, V. Laxmi, M. S. Gaur, M. Ahmed and K. K. Paliwal, ”Minimal Path, Fault Tolerant, QoS Aware Routing with Node and Link Failure in 2-D Mesh NoC,” 2010 IEEE 25th International Symposium on Defect and Fault Tolerance in VLSI Systems, 2010, pp. 60-66.  
<https://doi.org/10.1109/DFT.2010.14>
- Mushtaq Ahmed, M. S. Gaur, Vijay Laxmi ,” Adaptive Routing Over the 2D Hexagonal NoC ” International Conference on Embedded Systems (ICES 2010) by Coimbatore Institute of Technology, Coimbatore at Coimbatore Institute of Technology, Coimbatore / 5 / 2010
- Navaneeth Rameshan, Mushtaq Ahmed, M.S.Gaur, and V. Laxmi ,”Minimal Path, Fault Tolerant Routing in 2-D Mesh NoC” VLSI Design and Test (VDAT) Symposium by VLSI Society of India at Chitkara Univ. Chandigarh / 279-288 / 2010
- Mushtaq Ahmed, V. Laxmi, M.S. Gaur ,” Cross-Base Routing Over Diagonalized Mesh ” IRAST International Congress on Computer Applications and Computational Science (CACs 2010), ; 02/2013 by IRAST International Congress on Computer Applications and Computational Science at Singapore / 13-17 / 2010
- Navaneeth Rameshan, M. Ahmed, M.S. Gaur, Vijay Laxmi and Anurag Biyani ,”QoS Aware Minimally Adaptive XY Routing for NoC” Seventeenth Annual International Conference on Advanced Computing and Communications (ADCOM 2009) by Advanced Computing and Communications Society at IISc Bangalore / 300-302 / 2009
- Neeta Nain and Vijay Laxmi and Bhavitavya Bhadviya and B. M. Deepak and Mushtaq Ahmed ,”Fast Feature Point Detector” 4th IEEE International Conference on Signal Image Technology and Internet Based Systems (SITIS 08) by IEEE at Bali, Indonesia / 301-306 / 2008.

**INVITED as CHAIRED/CO-CHAIRER /KEYNOTE SPEAKER:**

- Invited as Jury Member in "Contribution of Indian Scientists and Scientific Institutions in the Indian Freedom Struggle: Prof. S.N. Bose" on 21-Oct-2023 at Arya College of Engineering and IT, Kukas, Jaipur.
- Session chair in Emerging Technology session of "4th International Conference on Data Science and Applications (ICDSA 2023)" Malaviya National Institute of Technology Jaipur, July-2023
- Session Chair in "International Conference on Emerging Computation Intelligence -ICECI 2023" International Conference, AMU Aligarh, Mar-2023
- Session chair in 27<sup>th</sup> Annual International Conference on "Advanced Computing and Communications ADCOM 2022" on March 9-11, 2023 organized by The Advanced Computing and Communication Society (ACCS) in association with the International Institute of Information Technology Bangalore (IIITB) at IIITB, Bangalore.
- Session chair in International Conference on "Emerging Computation Intelligence -ICECI 2023" on February 11-12, 2023 organized by the Department of Computer Science, Aligarh Muslim University, Aligarh, Uttar Pradesh, India
- Invited as Jury Member in "Forensic" Hackathon 2023" held during February 1-4, 2023 at National Forensic Sciences University (NFSU), Gandhinagar, Guajrat.
- Panel Speaker in Symposium on "CYBERSECURITY and its Career Prospects" organised by University of Engineering & Management (UEM), Jaipur, Rajasthan on JANUARY 20, 2023.
- Session chair in an international e-Conference on "Intelligent Systems-2021" ( ICIS-2021) on 13th-14th August 2021 organized by The Department of Electronics and Telecommunication Engineering of Dr. D. Y.Patil Institute of Technology, Pimpri, Pune-411018, Maharashtra, India.
- Session chair in International Conference on Optical and Wireless Technology 2018,IRIS, MNIT on 10-11 FEB, 2018.
- Session chair in International Conference 9th IEEE GCC region 9 International conference, 21-23 may 2017, Bahrain.
- Keynote Speaker on "Adaptive Live Video streaming in Peer to peer Network" in International Conference on Recent Developments in Engineering and Technology (ICRDET 2019) during 14th – 15th September, 2019 Rajasthan Technical University, Kota and Anand International College of Engineering, Jaipur .
- Keynote speaker on "Impact of Digitization in Society Transformation: Present & Future" in 4th National Conference , Department of Science and Technology (DST), Rajasthan on 21st & 22nd March 2018.

- Keynote Speaker on “Performance evaluation criterion for Network on Chip”, IEEE Comptelix 2017 (International Conference on Computer, Communications and Electronics 2017), July 1-2, 2017, Manipal University, Jaipur

#### INVITED TALK:

- Expert Talk on ”Generative AI” in Three-day national workshop on Deep Learning and Generative AI” held on Mar-2024 at AMU Aligarh.
- Keynote Talk on ”AI in Medical Healthcare System” in ”Two-Day Seminar On Automation, Robotics, AI And Applications” held on Mar-2024 at AMU, Aligarh.
- Expert Talk on ”IoT in Agriculture” in Three-day program on IoT Applications in Agriculture” organized by RTU Kota and Anand International College of Engineering, Jaipur held on March-2024.
- Keynote talk on ”Recent Advancements in On-Chip Interconnected Networks” in ”International Conference on Advances in Higher Technical Education (AHTE-2024) held on Feb-2024 at UEM, Jaipur.
- Keynote talk on ”Generative AI and blockchain based application in healthcare system” in FDP on ”Recent Trends in AI and ML for smart computing” held on Feb-2024 at Anand International College of Engineering Jaipur in association with RTU Kota.
- Expert Talk on ”Blockchain applications in the field of healthcare” in AICTE ATAL sponsored FDP on ”Integration of IoT and Blockchain to implement Smart Education, Healthcare, and Communication System” held on 11<sup>th</sup> – 16<sup>th</sup> December 2023 at Manipal University, Jaipur.
- Expert talk on ”Generative AI and Its Applications” in First International Symposium on Data Science -2023 held on November 08-9, 2023 at Manipal University, Jaipur, Rajasthan.
- Expert talk on ”Generative AI and its practical uses” in Faculty Development Program (FDP) on Advancements in Generative Artificial Intelligence (AI): Exploring Cutting-edge Techniques and Models sponsored by the Science and Engineering Research Board (SERB) and the Department of Science and Technology (DST) held during September 25-29, 2023 at Amity University Jaipur, Rajasthan.
- Expert talk on ”Responsible AI and Its application in GAIT Analysis” in National Seminar on Responsible AI and Sustainable Development held on August 26, 2023 at Aligarh Muslim University, Aligarh.
- Expert talk on ”Blockchain and its Applications” in Invited Talk series organised by Department of CSE, JMI held during August, 2023 at Jamia Milia Islamia , New Delhi.
- Expert talk on ”Cloud Computing and Security” in FDP on Intelligent Computing and Communications sponsored by DST Govt of India held during April 08-13, 2023 at Banasthali Vidyapeeth, Niwai, Rajasthan.

- Expert talk on "Blockchain and Its Security" in State Level Awareness Workshop on e-Governance Standards and Guidelines held during March 03-04, 2023 at Jaipur.
- Expert Talk on "Cryptographic security, hashing, and Digital signature" in AICTE ISTE one-week online refresher programme on "Digital Safety and Wellbeing: Tools and Technique" at Barmer (Jan-2022)
- Expert Talk on "Cloud Analysis and Security" in AICTE STTP on "Protection Of Big Data Privacy Via Encrypted Cloud Data "at Institute of Engineering & Technology (IET), Alwar 29- 30 July 2021
- Invited Talk on " Opportunistic Network" on 29th May 2021, Department of Computer Science and Engineering at ABESIT Gaziabad
- Expert Talk on "Amortize Cost Analysis of Self Balance Tree" , FDP on "Mathematical and Computational Modeling" at Anand Engg. College Jaipur from 18th – 22nd December 2020
- Expert Talk on "Advanced Concepts in Algorithms" in STTP on "Advanced Concepts in Computer Science & Engineering" Department of CSE, GEC Banswara (Rajasthan), December 14 to 19, 2020
- Expert talk in AICTE STTP on real-time embedded systems and IOT Its Applications 03-04 March 2020 Institute of Engineering & Technology Alwar.
- Expert lecture on " AI and Machine Learning" on 21st February 2020 at International Conference on Prospects of Artificial Intelligence and Robotics (ICPAIR – 2020) on February 21-22, 2020, at College Campus. Jaipur Engineering College Kukas.
- Expert talk on Routing in Mobile Adhoc Networks FDP TEQIP III 20-21 June 2019 Anand Engg. College Jaipur.
- Expert talk on "Network Simulators" in Networking Tools & Technologies (NTAT)" from 04th Nov to 8th Nov 2019 Under TEQIP-III. Engg. College Ajmer.
- Expert talk in FDP "Cloud Computing, Internet of Things (IoT)" on August 30, 2019, at Jaipur Engineering College, Kukas, Jaipur TEQIP-III RTU.
- Expert talk on "High-Speed Networking" delivered on November 14, 2018, at the Global Institute of Technology under RTU(ATU) TEQUIP/III.
- Expert talk on "High-speed Networking fundamentals" November 22, 2018, Manipal University Jaipur.
- Expert talk on Wireless Sensor Networks in Faculty Development Program 'Advances In Communication Technologies-2018' February 9th – 14th, 2018 MNIT Jaipur.
- Expert talk on "Computer Networks" in Govt. Engg. College Jhalawar TEQIP 3rd -4th March 2017.

#### **TECHNICAL PROGRAM COMMITTEE (TCP) MEMBER :**

- Organizing Committee member of IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS-2023) to be held on 17–20 December 2023, Jaipur, India.
- Organizing Committee member of 5th International Conference on Communication and Intelligent Systems (ICCIS 2023) Sponsored by Soft Computing Research Society to be held on December 16-17, 2023 at MNIT Jaipur, Rajasthan.
- ICETCE-2021: 4th International Conference on “Emerging Technologies in Computer Engineering: Data Science & Blockchain Technology, Swami Keshvanand Institute of Technology, Management & Gramothan (SKIT),Jaipur, India, February 3-4, 2021
- 3rd IEEE Conference on Information & Communication Technology, IIIT Allahabad,Dec 6th - 8 2019.
- International Conference on Emerging Technologies in Computer Engineering (ICETCE-2020),SKIT, Jaipur,7th- 8th February 2020
- International Conference on Artificial Intelligence and Machine Learning Applications,Swami Keshvanand Institute of Technology, Management & Gramothan Jaipur, Rajasthan, India. 5th-6th February, 2021
- Organizing Secretary of 3rd International Conference on Internet of Things and Connected Technologies (ICIoTCT), 2018, Malaviya National Institute of Technology (MNIT), Jaipur, March 26-27, 2018
- Advisory board member of International Conference On Information Technology & Digital Applications ,JECRC Foundation, Jaipur, Rajasthan 2018

#### **CONFERENCES/SEMINARS/WORKSHOPS ORGANIZED:**

- National level Workshop on PROTEUS VSM: 8051, IoT Builder for Arduino, AVR for IoT, and Robotics Simulation at MNIT JAIPUR, Jaipur City, INDIA from 06-05-2022 to 07-05-2022
- International level Conference on 6th International Conference on Soft Computing Theory and Applications SoCTA2021 at IIIT KOTA, Jaipur, India from 17-12-2021 to 19-12-2021
- National level Short Term Course on AICTE ATAL sponsored FDP on Blockchain Technologies & Applications at MNIT Jaipur, Jaipur, India from 06-09-2021 to 10-09-2021
- National level Short Term Course on Python Programming with Industry Perspective at MNIT, Jaipur, India from 02-12-2019 to 06-12-2019
- TEQIP Sponsored 2<sup>nd</sup> National Conference on “Advanced Communication Technologies and Networks”, MNIT Jaipur, June 20-21, 2019

- 3rd International Conference on “Internet of Things and Connected Technologies (ICIoTCT), 2018”, Malaviya National Institute of Technology (MNIT) Jaipur, and Center for Global Management, California State University, San Bernardino (CSUSB), USA, March 26-27, 2018
- Intel Sponsered one Day workshop on “Intel Nervana Program”, MNIT Jaipur, Nov 18th 2017
- TEQIP Sponsored Short Training Programme on Real Time Systems (RTS), Department of CSE MNIT Jaipur, Nov. 7-9, 2017
- National Workshop on “Proteus Svm Embedded System Workshop” , M/s Cyber motion, Hyderabad and CACS Technical Society MNIT Jaipur, Oct. 28-29, 2017
- TEQIP Sponsored National Conference on “Advanced Communication Technologies and Networks”, MNIT Jaipur, Oct. 24-25, 2017