

Jitendra Kumar (PhD, SMIEEE, MACM, MIAENG)

Assistant Professor

Department of Mathematics, Bioinformatics, and Computer Applications

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Dr. Jitendra Kumar serves as an Assistant Professor at an institution of national importance, India (Maulana Azad National Institute of Technology Bhopal, India), within the Department of Mathematics, Bioinformatics, and Computer Applications. His academic journey includes a Ph.D. from the National Institute of Technology, Kurukshetra, and prior experience as an Assistant Professor at the National Institute of Technology, Tiruchirappalli. His research interests encompass machine learning, computational intelligence, predictive analytics, and cloud computing.

A significant portion of Dr. Kumar's work addresses the challenges of workload forecasting in cloud data centers. Accurate workload prediction is vital for efficient resource management, ensuring that computational resources are allocated optimally to meet demand without over-provisioning. One of his work explored the integration of artificial neural networks with adaptive differential evolution techniques. This hybrid approach aimed to improve the accuracy of workload predictions by combining the learning capabilities of neural networks with the optimization strength of evolutionary algorithms. The resulting model exhibited enhanced performance in forecasting dynamic workloads, contributing to more responsive and efficient cloud resource management. He also proposed an ensemble learning-based predictive framework that integrates multiple machine learning models to forecast VM resource requests. This ensemble approach leverages the strengths of individual models, resulting in more robust and accurate predictions, which are critical for maintaining the performance and reliability of cloud services. Dr. Kumar's research also delves into the optimization of virtual machine (VM) placement within cloud data centers. Efficient VM placement is crucial for maximizing resource utilization and minimizing operational costs. He developed a secure and multi-objective VM placement framework that considers factors such as security requirements, resource constraints, and energy efficiency. This comprehensive approach ensures that VMs are allocated in a manner that balances performance with security considerations, thereby enhancing the overall reliability of cloud services.

Beyond his research endeavors, Dr. Kumar is actively involved in the academic community. He has co-authored numerous research articles published in reputable journals and conferences, contributing to the advancement of knowledge in his areas of expertise. His collaborations with other scholars have led to interdisciplinary research that addresses complex challenges in cloud computing and machine learning. Dr. Kumar's dedication to research excellence is further evidenced by the recognition he has received from the academic community. His work has garnered significant citations, reflecting the impact and relevance of his contributions to the fields of machine learning and cloud computing. This recognition underscores the importance of his research in addressing real-world challenges and advancing technological innovation.

To summarize, Dr. Jitendra Kumar's research portfolio showcases a commitment to advancing the fields of machine learning, cloud computing, and predictive analytics. His innovative approaches to workload forecasting, resource optimization, and adaptive learning have contributed to more efficient and secure cloud data center operations. Through his scholarly work, Dr. Kumar continues to influence the development of intelligent systems that enhance the performance and reliability of cloud services, thereby meeting the evolving demands of the digital landscape.

EDUCATION

Doctor of Philosophy <i>National Institute of Technology Kurukshetra, India</i>	Oct 2015 - Feb 2020
Master of Technology <i>Dayalbagh Educational Institute, Agra, India</i>	July 2011 - May 2013
Master of Science <i>Dayalbagh Educational Institute, Agra, India</i>	July 2009 - Dec 2010
Bachelor of Computer Applications <i>Dr. B.R. Ambedkar University, Agra, India (formerly: Agra University)</i>	July 2005 - Dec 2008

POSITIONS HELD

Maulana Azad National Institute of Technology Bhopal, India <i>Assistant Professor</i> • Teaching: Neural Networks, Computer Architecture, and Computer Architecture & System Software • Administration: Anti Ragging Committee Member, Audit Verification Officer, Department Social Media Coordinator, Time Table Coordinator, Department Academic Committee Co-Coordinator	May 2024 - Present
National Institute of Technology Tiruchirappalli, India <i>Assistant Professor</i> • Teaching: Data Analytics, Big Data Analytics, Introduction to Programming, and Object Oriented Analysis and Design • Administration: Anti Ragging Committee Member, Institutional Development & Alumni Relations Data Coordinator (CA Department), Verification Officer NIMCET-2021, NBA Accreditation Committee (Co-coordinator, MCA), Syllabus Revision Committee (Co-coordinator, MCA), Accommodation & Space Allocation Committee, Coordinator Web Development, Performance Analysis Committee Chairman	May 2020 - April 2024
GLA University Mathura, India <i>Assistant Professor</i> • Teaching: Introduction to Machine Learning, Design and Analysis of Algorithms, Cloud Computing, Computer Organization • Administration: Student Performance Monitoring Committee Member	July 2019 - May 2020
Galgotias University, Greater Noida, India <i>Assistant Professor</i> • Teaching: Computer Programming & Problem Solving, Computer Graphics, Universal Human Values & Ethics • Administration: Time Table, Result & Analysis, Anti Ragging	April 2014 - Oct 2015
Dayalbagh Educational Institute, Agra, India <i>Software Engineer</i> • Assisted in developing Online Admission System (https://www.dei.ac.in/dei/admission/)	Nov 2013 - March 2014
Dayalbagh Educational Institute, Agra, India <i>Teaching Assistant</i> • Assisted Dr. Lotika Singh to develop course notes, assignments, and lab manuals for Parallel Programming, Operating Systems, Introduction to Linux	July 2011 - May 2013

PUBLICATIONS

Books

1. Jitendra Kumar, Ashutosh Kumar Singh, Anand Mohan, Rajkumar Buyya, “[Machine Learning for Cloud Management](#)”, *Chapman and Hall/CRC*, 1st edition, 2021. (ISBN: 9780367626488)
2. Abhishek Verma, Jitendra Kumar, Hari Mohan Gaur, Vrijendra Singh, Valentina Emilia Balas (eds.), “[Advances in Cyber Security and Intelligent Analytics](#)”, *Chapman and Hall/CRC*, 1st edition, 2022. (ISBN: 9781000821390)
3. Jitendra Kumar, G. R. Gangadharan, Ashutosh Kumar Singh, Chung-Nan Lee (eds.), “[Cloud of Things: Foundations, Applications, and Challenges](#)”, *Chapman and Hall/CRC*, 1st edition, 2024. (ISBN: 9781032484419)
4. Vivek Kumar Singh, Jitendra Kumar, Deepika Saxena, Abhishek Verma, Thangarajah Akilan, Ashutosh Kumar Singh (eds.), “Machine Vision Analysis in Industry 5.0: Fundamentals, Applications, and Challenges”, *Chapman and Hall/CRC*. (Submitted to Publisher)

Book Chapters

5. Reshma MO, Jitendra Kumar, Abhishek Verma, “[An Adaptive Deep Learning Approach for Stock Price Forecasting](#)”, in *Advances in Cyber Security and Intelligent Analytics*, Chapman and Hall/CRC, 2022 , pp. 1-12.
6. Harsh Rai, Vamshi Adouth, Deepika Saxena, Jitendra Kumar, “[Cloud assisted Blockchain-based Decentralized Freelancing Market Place](#)”, in *Cloud of Things: Foundation, Applications, and Challenges*, Chapman and Hall/CRC, 2024 .
7. Vinaytosh Mishra, Chandra Shekhar, Jitendra Kumar, Ashutosh Kumar Singh, “[AI-Based Mass Screening of Tuberculosis Using Cloud-Based EHR and CXR - An Implication for India's National Strategic Plan to End TB](#)”, in *Cloud of Things: Foundation, Applications, and Challenges*, Chapman and Hall/CRC, 2024 .

Journal Papers

Published/Accepted

8. Jitendra Kumar, Deepika Saxena, Kishu Gupta, Satyam Kumar, Ashutosh Kumar Singh, “[A Comprehensively Adaptive Architectural Optimization-Ingrained Quantum Neural Network Model for Cloud Workloads Prediction](#)”, *IEEE Transactions on Neural Networks and Learning Systems*. (SCI/WoS, Q1, IF = 8.9)
9. Sushanshu Saurav, Jitendra Kumar, “[Exploring the Effectiveness of Machine Learning Models on Livestock Behaviour Classification using 9-axial Inertial Sensor](#)”, *Evolutionary Intelligence*, vol. 18 (90), 2025. (Scopus/WoS, Q2, IF = 2.6)
10. Anjali, Vrijendra Singh, Jitendra Kumar, “[GSSX: Golden Section-Based Symbolic Representation for Reducing Time Series Dimensionality](#)”, *International Journal of Data Science and Analytics*. (Scopus/WoS, Q2, IF = 3.4)

11. Jitendra Kumar, Deepika Saxena, Jatinder Kumar, Abhilash Bhadoria, Anjali, Ashutosh Kumar Singh, “[A Hybrid Neural Network and Cooperative PSO Model for Dynamic Cloud Workloads Prediction](#)”, *Computing*, vol. 107, 2025. (SCI/WoS, Q1, IF = 3.3)
12. Sakshi Chhabara, Jitendra Kumar, Deepika Saxena, Ashutosh Kumar Singh, “[Classified Dynamic Hierarchical Load Balancer for Cloud Data Centers](#)”, *SN Computer Science*, vol. 6, 2025. (Scopus)
13. Deepika Saxena, Niharika Singh, Kishu Gupta, Abhishek Verma, Vinaytosh Mishra, Jatinder Kumar, Ishu Gupta, Sakshi Chhabara, Rishabh Gupta, Jatinder Kumar, Ashutosh Kumar Singh, “[An Intelligent Multi-Depot Vehicle Routing and Management Model for Smart Cities](#)”, *IEEE Transactions on Intelligent Transportation Systems*, vol. 26, no. 6, pp. 7740-7754, 2025. (SCI/WoS, Q1, IF = 8.4)
14. Jatinder Kumar, Deepika Saxena, Jitendra Kumar, Ashutosh Kumar Singh, Athanasios V. Vasilakos, “[An Adaptive Evolutionary Neural Network model for Load Management in Smart Grid Environment](#)”, *IEEE Transactions on Network and Service Management*, vol. 22, pp. 242-254, 2024. (SCI/WoS, Q1, IF = 4.2)
15. Kishu Gupta, Deepika Saxena, Pooja Rani, Jitendra Kumar, Aaisha Makkar, Ashutosh Kumar Singh, “[An Intelligent Quantum Cyber-Security Framework for Healthcare Data Management](#)”, *IEEE Transactions on Automation Science and Engineering*, vol. 22, pp. 6884-6895, 2024. (SCI/WoS, Q1, IF = 5.9)
16. Raseena T.P., Jitendra Kumar, Balasundaram S.R., “[DeepCPD: Deep Learning with Vision Transformer for Colorectal Polyp Detection](#)”, *Multimedia Tools & Applications*, vol. 83, pp. 78183-78206, 2024. (SCI/WoS, Q1, IF = 3.00)
17. Raseena T.P., Jitendra Kumar, Balasundaram S.R., “[Exploring the Effectiveness of Deep Learning Architectures for Colorectal Polyp Detection: Performance Analysis and Insights](#)”, *SN Computer Science*, vol. 5, pp. 1-27, 2024. (Scopus)
18. Anjali, Hong-Nig Dai, Jitendra Kumar, Om Jee Pandey, “[AERed: An Autoencoder-decoder Dimensionality Reduction Method for Wearable-Based Human Activity Recognition](#)”, *IEEE Sensors Journal*, vol. 23, pp. 29804-29814, 2023. (SCI/WoS, Q1, IF = 4.3)
19. Deepika Saxena, Jitendra Kumar, Ashutosh Kumar Singh, Stefan Schmid, “[Performance Analysis of Machine Learning Centered Workload Prediction Models for Cloud](#)”, *IEEE Transactions on Parallel and Distributed Systems*, vol. 34, pp. 1313-1330, 2023. (SCI/WoS, Q1, IF = 5.6)
20. Niharika Singh, Jitendra Kumar, Ashutosh Kumar Singh, Anand Mohan, “[Privacy-preserving multi-keyword hybrid search over encrypted data in cloud](#)”, *Journal of Ambient Intelligence and Humanized Computing*, vol. 15, pp. 261-274, 2024. (SCI/WoS, Q1, IF = 3.662)
21. Jitendra Kumar, Ashutosh Kumar Singh, “[Performance evaluation of metaheuristic algorithms for workload prediction in cloud environment](#)”, *Applied Soft Computing*, vol. 113, Part A, pp. 107895, 2021. (SCI/WoS, Q1, IF = 7.2)
22. Deepika Saxena, Ishu Gupta, Jitendra Kumar, Ashutosh Kumar Singh, Xiaoqing Wen, “[A Secure and Multi-objective Virtual Machine Placement Framework for Cloud DataCenter](#)”, *IEEE Systems Journal*, vol. 16, no. 2, pp. 3163-3174, 2022. (SCI/WoS, Q1, IF = 4.0)

23. Ashutosh Kumar Singh, Deepika Saxena, Jitendra Kumar, Vrinda Gupta, “[A quantum approach towards the adaptive prediction of cloud workloads](#)”, *IEEE Transactions on Parallel and Distributed Systems*, vol. 32, no. 12, pp. 2893-2905, 2021. (SCI/WoS, Q1, IF = 5.6)
24. Jitendra Kumar, Ashutosh Kumar Singh, Rajkumar Buyya, “[Self directed learning based workload forecasting model for cloud resource management](#)”, *Information Sciences*, vol. 543, pp. 345-366, 2021. (SCI/WoS, Q1, IF = 8.1)
25. Jitendra Kumar, Ashutosh Kumar Singh, Rajkumar Buyya, “[Ensemble learning based predictive framework for virtual machine resource request prediction](#)”, *Neurocomputing*, vol. 397, pp. 20-30, 2020. (SCI/WoS, Q1, IF = 5.5)
26. Jitendra Kumar, Ashutosh Kumar Singh, “[Decomposition based cloud resource demand prediction using extreme learning machines](#)”, *Journal of Network and Systems Management*, vol. 28, pp. 1775-1793, 2020. (SCI/WoS, Q2, IF = 4.1)
27. Jitendra Kumar, Deepika Saxena, Ashutosh Kumar Singh, Anand Mohan, “[BiPhase adaptive learning-based neural network model for cloud datacenter workload forecasting](#)”, *Soft Computing*, vol. 24, pp. 14593-14610, 2020. (SCI/WoS, Q2, IF = 3.1)
28. Jitendra Kumar, Ashutosh Kumar Singh, Anand Mohan, “[Resource-efficient load-balancing framework for cloud data center networks](#)”, *ETRI Journal*, vol. 43, pp. 53-63, 2021. (SCI/WoS, Q2, IF = 1.3)
29. Jitendra Kumar, Ashutosh Kumar Singh, “[Cloud datacenter workload estimation using error preventive time series forecasting models](#)”, *Cluster Computing*, vol. 23, iss. 2, pp. 1363-1379, 2020. (SCI/WoS, Q1, IF = 3.6)
30. Jitendra Kumar, Ashutosh Kumar Singh, “[Performance assessment of time series forecasting models for cloud datacenters’ workload prediction](#)”, *Wireless Personal Communications*, vol. 116, pp. 1949-1969, 2021. (SCI/WoS, Q2, IF = 1.9)
31. Jitendra Kumar, Ashutosh Kumar Singh, “[Adaptive learning based prediction framework for cloud datacenter networks’ workload anticipation](#)”, *Journal of Information Science and Engineering*, vol. 36, iss. 5, pp. 981-992, 2020. (SCI/WoS, Q2, IF = 1.142)
32. Ashutosh Kumar Singh, Jitendra Kumar, “[Secure and energy aware load balancing framework for cloud data centre networks](#)”, *Electronics Letters*, vol. 55, iss. 9, pp. 540-541, May, 2019. (SCI/WoS, Q2, IF = 0.7)
33. Jitendra Kumar, Ashutosh Kumar Singh, “[An efficient machine learning approach for virtual machine resource demand prediction](#)”, *International Journal of Advanced Science and Technology*, vol. 123, pp. 21-30, February, 2019. (Scopus)
34. Jitendra Kumar, Ashutosh Kumar Singh, “[Workload prediction in cloud using artificial neural network and adaptive differential evolution](#)”, *Future Generation Computer Systems*, vol. 81, pp. 41-52, April, 2018. (SCI/WoS, Q1, IF = 6.2) (, ISSN: 0167-739X)
35. Jitendra Kumar, Rimsha Goomer, Ashutosh Kumar Singh, “[Long Short Term Memory Recurrent Neural Network \(LSTM-RNN\) based workload forecasting model for cloud datacenters](#)”, *Procedia Computer Science*, vol. 125, pp. 676-682, January, 2018. (Scopus) (, ISSN: 1877-0509)

Conference Papers

36. Raseena T.P., Jitendra Kumar, Balasundaram S.R., “[A Visionary Approach for Enhanced CRC Diagnosis by Leveraging Visual Geometry Group’s Classic Deep Network](#)”, *7th International Conference on Recent Trends in Image Processing and Pattern Recognition, IIIT Bhopal, India*, 2024. (Accepted for publication)
37. Tushar Prasanna Swaminathan, Christopher Silver, Jitendra Kumar, Thangarajah Akilan, “[Benchmarking Deep Learning Models on NVIDIA Jetson Nano for Real-Time Systems: An Empirical Investigation](#)”, *7th International Conference on Recent Trends in Image Processing and Pattern Recognition, IIIT Bhopal, India*, 2024. (Accepted for publication)
38. P. Ravi Kumar, Aman Wakade, Jatinder Kumar, Smruti Rekha Swain, Jitendra Kumar, Ashutosh Kumar Singh, “[On Detecting Frauds in Retail Transactions for Enhanced Security with Deep Learning Model](#)”, *7th International Conference on Recent Trends in Image Processing and Pattern Recognition, IIIT Bhopal, India*, 2024. (Accepted for publication)
39. Raseena T.P., Aditya Kumar Soni, Jitendra Kumar, Thangarajah Akilan, Ashutosh Kumar Singh, “[An Analysis of YOLOvX Deep Learning Models for Colon Cancer Detection](#)”, *7th International Conference on Recent Trends in Image Processing and Pattern Recognition, IIIT Bhopal, India*, 2024. (Accepted for publication)
40. Sanjeev Kumar, Yudhishthira Sapru, Jitendra Kumar, Sugandha Sapru, “[Image analysis and fine-tuned ResNet50 model for effective malware detection](#)”, *7th International Conference on Recent Trends in Image Processing and Pattern Recognition, IIIT Bhopal, India*, 2024. (Accepted for publication)
41. Keerthana Senthilnathan, Jitendra Kumar, “Cloud resource usage forecasting using a deep learning-based predictive framework”, *3rd International Conference on Advanced Communication and Intelligent Systems (ICACIS), Jawaharlal Nehru University, New Delhi, India*, 2024.
42. Raseena T.P., Jitendra Kumar, Balasundaram S.R., “[A Residual Learning Approach Towards the Diagnosis of Colorectal Disease Effectively](#)”, *2023 6th International Conference on Recent Trends in Image Processing and Pattern Recognition (RTIP2R), University of Derby, United Kingdom*, 2023, pp. 160-172. (**Scopus**)
43. Sajeev Vijaykumar, Jitendra Kumar, “[Cloud Resource Usage Forecasting Using Neural Network and Artificial Lizard Search Optimization](#)”, *2022 10th IEEE Humanitarian Technology Conference (R10 HTC), Hyderabad, India*, 2022, pp. 7-12. (**Scopus**)
44. Jitendra Kumar, Ashutosh Kumar Singh, “[Cloud resource demand prediction using differential evolution based learning](#)”, *2019 7th International Conference on Smart Computing & Communications (ICSCC), Sarawak, Malaysia, Malaysia*, 2019, pp. 1-5. (**Scopus**) (*Best Paper Award*)
45. Vartika Sharma, Sizman Kaur, Jitendra Kumar, Ashutosh Kumar Singh, “[A fast parkinson’s disease prediction technique using PCA and artificial neural network](#)”, *2019 International Conference on Intelligent Computing and Control Systems (ICICCS), Madurai, India*, 2019, pp. 1491-1496. (**Scopus**)

46. Sukhman Singh, Tarun Kumar Madan, Jitendra Kumar, Ashutosh Kumar Singh, “[Stock market forecasting using machine learning: today and tomorrow](#)”, *Second International Conference on Intelligence Computing, Instrumentation and Control Technologies (ICICICT-2019)*, Kannur, Kerla, India, 2019, pp. 738-745. (**Scopus**)
47. Preetesh K. Yadav, Sourav Pareek, Shaif Shakeel, Jitendra Kumar, Ashutosh Kumar Singh, “[Advancements and security issues of IoT & cyber physical systems](#)”, *2019 International Conference on Intelligent Computing and Control Systems (ICICCS)*, Madurai, India, 2019, pp. 940-945. (**Scopus**)
48. Jitendra Kumar, Ashutosh Kumar Singh, “[Dynamic resource scaling in cloud using neural network and black hole algorithm](#)”, *2016 Fifth International Conference on Eco-friendly Computing and Communication Systems (ICECCS)*, Bhopal, India, 2016, pp. 63-67. (**Scopus**) (*Best Paper Award*)
49. Mayank Dixit, Jitendra Kumar, Rajesh Kumar, “[Internet of things and its challenges](#)”, *2015 International Conference on Green Computing and Internet of Things (ICGCIoT)*, Noida, India, 2015, pp. 810-814. (**Scopus**)
50. Jitendra Kumar, Rajesh Kumar, Mayank Dixit, “[Result merging in meta-search engine using genetic algorithm](#)”, *International Conference on Computing, Communication & Automation (ICCCA)*, Noida, India, 2015, pp. 299-303. (**Scopus**)
51. Jitendra Kumar, Lotika Singh, Sandeep Paul, “[GPU based parallel cooperative Particle Swarm Optimization using C-CUDA: A case study](#)”, *2013 IEEE International Conference on Fuzzy Systems (FUZZ-IEEE)*, Hyderabad, India, 2013, pp. 1-8. (**Scopus**)

Technical Reports

52. Sakshi Chhabara, Deepika Saxena, Jitendra Kumar, Ashutosh Kumar Singh, “[Classified Dynamic Hierarchical Load Balancer for Cloud Data Centers](#)”, *PREPRINT (Version 1) available at Research Square*, 2022.
53. Pooja Tiwari, Simran Mehta, Nishtha Sakhuja, Jitendra Kumar, Ashutosh Kumar Singh, “[Credit Card Fraud Detection using Machine Learning: A Study](#)”, *arXiv:2108.10005*, 2021.
54. Harsh Mittal, Deepak Rikhari, Jitendra Kumar, Ashutosh Kumar Singh, “[A study on Machine Learning Approaches for Player Performance and Match Results Prediction](#)”, *arXiv:2018.10125*, 2021.

AWARDS

- Best PhD Thesis Award, 2023 International Conference on Recent Trends in Image Processing and Pattern Recognition (RTIP2R), Derby University, United Kingdom.
- Best Paper Award, 2019 International Conference on Smart Computing & Communication (ICSCC), Curtin University, Malaysia.
- Best Paper Award, 2016 International Conference on Eco-friendly Computing & Communication Systems (ICECCS), MANIT Bhopal, India.
- Visvesvaraya PhD Scheme Fellowship, Ministry of Electronics & Information Technology, Govt. of India. [Oct 2015 - July 2019]

- Graduate Aptitude Test Engineering (GATE) Fellowship, Ministry of Human Resource & Development, Govt. of India. [July 2011 - May 2013]
- Director Medal, MSc Examination 2011, Dayalbagh Educational Institute, Agra, India.

EDITORIAL SERVICES

1. Diana Berbecaru, Riccardo Sisto, Deepika Saxena, Jitendra Kumar, *Cybersec Attacks and Defenses*, "Computer Networks, Elsevier, 2025. [Ongoing]
2. Ashutosh Kumar Singh, K C Santosh, Jitendra Kumar, Deepika Saxena, Aaisha Makkar, *Proceedings of 7th International Conference on Recent Trends in Image Processing and Pattern Recognition*, 2024. [Submitted to Publisher]
3. Vivek Kumar Singh, Jitendra Kumar, Deepika Saxena, Abhishek Verma, Thangarajah Akilan, Ashutosh Kumar Singh, *Machine Vision Analysis in Industry 5.0: Fundamentals, Applications, and Challenges*, CRC Press, 2025. [Submitted to Publisher]
4. Ashutosh Kumar Singh, Jitendra Kumar, Deepika Saxena, K C Santosh, Special issue on "*Revolutionizing Healthcare Informatics with Generative Artificial Intelligence: Innovations and Implications*," IEEE Journal of Biomedical and Health Informatics, 2024. [Ongoing]
5. Ashutosh Kumar Singh, Jitendra Kumar, Deepika Saxena, Athanasios V. Vasilakos, Special section on "*eXplainable Artificial Intelligence (XAI): Methods, Applications, and Challenges*," Computers Electrical and Engineering, Elsevier, 2024.
6. Jitendra Kumar, G. R. Gangadharan, Ashutosh Kumar Singh, Chung-Nan Lee, "*Cloud of Things: Foundations, Applications, and Challenges*," CRC Press, 2024.
7. Jonathan Wu, Thangarajah Akilan, Jitendra Kumar, Chengsheng Yuan, "*Machine Vision Applications and Efficient Deep Learning Models for Resource-Limited Learning*," Journal of Imaging, MDPI, 2022.
8. Abhishek Verma, Jitendra Kumar, Hari Mohan Gaur, Vrijendra Singh, Valentina Emilia Balas, "*Advances in Cyber Security and Intelligent Analytics*," CRC Press, 2022.

INVITED TALKS

- Education and Artificial Intelligence, Mahatma Hansraj Malaviya Mission Teacher Training Centre (MH-MMTTC), Hansraj College, University of Delhi. [December 28, 2024]
- Revolutionizing Education through Artificial Intelligence, Hansraj College, University of Delhi. [July 7, 2023]
- Machine Learning in the Air: Today and Tomorrow, Vellore Institute of Technology, Vellore, India. [May 9, 2023]
- Neural Networks for Predictive Modelling, Vellore Institute of Technology, Chennai, India. [March 16, 2023]
- Presenting Scientific Data: Plots, Postscripts, and PDF Graphics in T_EX, National Institute of Technology Kurukshetra, India. [March 15, 2022]
- Quantum Evolutionary Neural Network: Biological inspired computing and quantum principles, ABESIT College of Engineering, Ghaziabad, Uttar Pradesh, India. [Nov 25, 2021]

- Research Confront and Document Preparation using LaTeX, National Institute of Technology Kurukshetra, India. [Aug, 2021]
- Evolutionary Neural Networks, PSNA College of Engineering & Technology, Dindigul, Tamilnadu, India. [Jan 14, 2021]
- Plots & Figures in L^AT_EX, ABESIT College of Engineering, Ghaziabad, Uttar Pradesh, India. [Feb 11, 2021]
- Machine Learning: Today and Tomorrow, Gulzar Group of Institutes, Ludhiana, Punjab, India. [Oct 6, 2020]

PROFESSIONAL SOCIETY MEMBERSHIP

- Senior Member, Institute of Electrical and Electronics Engineers (IEEE) Aug 2012 - Today
- Member, IEEE Computational Intelligence Society Dec 2021 - Today
- Member, Association for Computing Machinery (ACM) Jan 2021 - Today
- Member, IEEE SIGHT Jan 2021 - Today
- Member, Machine Intelligence Research Labs July 2020 - Today
- Member, IEEE Young Professionals Jan 2014 - Today
- Member, Cloud Computing Community, IEEE March 2013 - Today
- Member, IEEE Communications Society Jan 2013 - Dec 2013

EVENT ORGANIZATION

1. [7th International Conference on Recent Trends in Image Processing and Pattern Recognition \(RTIP2R-2024\)](#), Indian Institute of Information Technology Bhopal, India. (Conference/Program Chairs: Jitendra Kumar, Deepika Saxena, Aaisha Makkar)
2. Special session on “Advanced Data Science and Machine Learning in Cutting-Edge Applications with Security Measures,” [3rd International Conference on Advanced Communication and Intelligent Systems \(ICACIS-2024\)](#), Jawaharlal Nehru University, New Delhi, India. (Session Chairs: Anil Kumar Sagar, Jitendra Kumar)
3. Special session on “Cyber Medical System: Personalized Healthcare,” [6th International Conference on Recent Trends in Image Processing and Pattern Recognition \(RTIP2R-2023\)](#), University of Derby, United Kingdom. (Session Chairs: Jitendra Kumar, Ashutosh Kumar Singh, Chung-Nan Lee)

CONFERENCE PRESENTATIONS

- 2023 International Conference on Recent Trends in Image Processing & Pattern Recognition (RTIP2R), Dec 7-8, 2023, University of Derby, United Kingdom.
- 2017 International Conference on Smart Computing & Communications (ICSCC), Dec 7-8, 2017, National Institute of Technology Kurukshetra, India
- 2016 Fifth International Conference on Eco-friendly Computing & Communication Systems (ICECCS), Dec 8-9, 2016, National Institute of Technology, Bhopal, India
- 2015 International Conference on Computing, Communications & Automation (ICCCA), May 15-16, 2015, Galgotias University, Greater Noida, India
- 2013 IEEE International Conference on Fuzzy Systems (FUZZ-IEEE), July 7-10, 2013, Hyderabad International Convention Center (HICC), Hyderabad, India

SEMINAR/ WORKSHOP ATTENDED

- E-Content Development, Aug 10-14, 2020, National Institute of Technology Tiruchirappalli, India
- High Impact Teaching Skills, Jan 13-15, 2020, GLA University Mathura, India
- T3 IBM Workshop on Introduction to Artificial Intelligence & Machine Learning, Dec 30, 2019 - Jan 1, 2020, GLA University Mathura, India
- T3 IBM Workshop on Security in Cloud, July 15-17, 2019, GLA University Mathura, India
- One day seminar-cum-awareness program on Data Analysis, Nov 1, 2018, National Institute of Technology Kurukshetra, India
- Multiobjective Optimization using Metaheuristics, March 3-7, 2018, Indian Institute of Technology Kanpur, India
- Research Evaluation Workshop, Visvesvaraya PhD Scheme for Electronics & IT/ITES, Nov 16-18, 2017, Andhra University, Visakhapatnam, India
- Article & Thesis Writing with L^AT_EX, March 30-31, 2017, National Institute of Technology Kurukshetra, India
- International Workshop on Computational Intelligence and Applications, May 23-25, 2016, South Asian University, New Delhi, India
- National Workshop on Cyber Security: Innovations & Opportunities (CyberSec-2016), Feb 12-13, 2016, National Institute of Technology Kurukshetra, India
- Workshop on Android development, July 27-29, 2015, Galgotias University, Greater Noida, India
- Workshop on Universal Human Values and Ethics, July 13-21, 2015, Galgotias University, Greater Noida, India
- Workshop on Mobile Application Development using IBM Worklight, Galgotias University, Greater Noida, India
- Bridges between Physics & Biology, March 31, 2013, Dayalbagh Educational Institute, Agra, India
- Engineering and Analysis of Evolutionary Algorithms (EAEA-2013), Jan 16-18, 2013, Dayalbagh Educational Institute, Agra, India
- Bio Inspired Systems, April 3, 2012, Dayalbagh Educational Institute, Agra, India
- Soft Computing Techniques for Biometric Technologies, March 30, 2010, Dayalbagh Educational Institute, Agra, India
- Dream Spark Yatra, Microsoft

VOLUNTEER ACTIVITIES

- Sixth International Conference on Smart Computing and Communication (ICSCC-2017)
- National IT Challenge for Youth with Disabilities 2016

COMPETITIONS PARTICIPATED

- DExtreme, 6.0 IEEE Xtreme Programming Competition 2012
- Quantos, 11.0 IEEE Xtreme Programming Competition 2017

EDITORIAL/REVIEW BOARD MEMBER

- Editorial Board Member, Research Reports on Computer Science (RRCS)
- IEEE Transactions on Parallel and Distributed Systems
- IEEE Transactions on Computers
- IEEE Systems Journal
- IEEE Access
- Future Generation Computer Systems, Elsevier
- Journal of Parallel and Distributed Computing, Elsevier
- Parallel Computing, Springer
- Journal of Supercomputing, Springer
- Applied Intelligence, Springer
- Engineering Optimization, Taylor & Francis
- Journal of Information Science & Engineering
- Pertanika Journal of Science & Technology (JST)
- Journal of Bionic Engineering, Springer
- IEEE Conference on Artificial Intelligence (IEEE-CAI)
- IEEE World Congress on Computational Intelligence (IEEEWCCI)
- International Joint Conference on Neural Networks (IJCNN)
- IEEE International Conference on Fuzzy Systems (FUZZ-IEEE)
- IEEE Congress on Evolutionary Computation (IEEE-CEC)

CONFERENCE COMMITTEE MEMBER

- TPC Member, 2022 International Conference on Emerging Trends and Technologies on Intelligent Systems (ETTIS-2022)
- TPC Member, 2022 International Conference on Decision Aid Sciences and Applications (DASA-2022)
- TPC Member, 2022 International Conference on Communication Systems and Network Technologies (CSNT-2022)
- TPC Member, 2021 International Conference on Information Systems and Computer Networks (ISCON-2021)
- TPC Member, 2021 International Conference on Emerging Trends and Technologies on Intelligent Systems (ETTIS-2021)
- TPC Member, 2021 International Conference on Secure Cyber Computing and Communications (ICSCCC-2021)
- Session Chair, 2020 International Conference on Smart Communication and Imaging Systems (MEDCOM-2020)
- TPC Member, 2019 International Conference on Computing, Communication, and Intelligent Systems (ICCCIS-2019)
- Session Chair, 2015 International Conference on Computing, Communications & Automation (ICCCA-2015)