

## **CURRICULUM VITAE**



4103, Computer Centre (CC-2)  
IIIT-Allahabad, Jhalwa  
Prayagraj, Pin- 211011  
Ph- 0532-2922196, 09450961205  
Email : [manish@iiita.ac.in](mailto:manish@iiita.ac.in)  
<http://profile.iiita.ac.in/manish/>

**Dr. MANISH KUMAR**

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### **Work Experience:**

[Dec 2017-Continue]- **Associate Professor** at **Indian Institute of Information Technology (IIIT), Allahabad**

[June 2010-Nov 2017]- **Assistant Professor** at **Indian Institute of Information Technology (IIIT), Allahabad**

[July 2005- May 2010]-**Lecturer** at **Indian Institute of Information Technology (IIIT), Allahabad**

[July 2004- June 2005]- **Lecturer** in Computer Science and Information Technology Department at **Birla Institute of Technology and Science (BITS), Pilani, Rajasthan.**

[September 2002- July 2004]- **Associate Lecturer** and **Research Associate** cum Tutor in Computer Science Department at **Birla Institute of Technology(BIT), Mesra, Ranchi .**

### **Professional Membership/Association:**

- Senior Member, IEEE [ Member #: 90580456]
- ACM [ Member #: 1417948]
- International Association of Engineers
- Secretary, IEEE Computer Society, UP Section, India

### **Academic/Administrative Responsibilities (other than teaching)**

Stream Chair: M.Tech(IT) specialization in Data Engineering

Associate Dean(S&P)

Faculty Convener: M.Tech (DSA) Dept. of Applied Science

## **Past responsibilities**

1. Chairman, Council of Wardens (COW), Hostels, IIIT Allahabad
2. Convener, Departmental Under Graduate Committee (DUGC-IT Dept.)
3. Chairman, Senate Under graduate Committee(SUGC)
4. Faculty In-charge (Sports)
5. Estate officer. IIIT Allahabad
6. Warden (Boys hostel-4)
7. Faculty Advisor (Sports), IIIT-A
8. Faculty In-charge (Maintenance Cell, Computers and Labs.)

## **Educational Qualification:**

**Ph.D** from **Indian Institute of Information Technology, Allahabad.**

[Duration: January 2007- April 2010, Submitted in April 2010 and awarded on 21<sup>st</sup> August 2011]

\*Topic: Data management in Wireless Sensor Networks\*

**M.Tech (Computer Science)** in the year 2002 from **Birla Institute of Technology, Mesra.**

**Post Graduate Diploma (Computer Application)** in the year 2000 from **Birla Institute of Technology, Mesra.**

**Master of Science (Operational Research)** in the year 1999 from **Delhi University, Delhi.**

## **Area of Research/Interest:**

- Data Management in Wireless Sensor Network/IoT
  - Data Aggregation
  - Query processing
  - Compressed Sensing based Inference
  - Privacy preserving data management
- Big data analytics, Data Engineering
  - Parallel and distributive approach
  - Transactional data mining

### **Laboratory developed/initiated**

- Faculty Coordinator, Data Analytics Lab (DAL), IIIT Allahabad

### **Industry/organization Collaboration**

1. Member of Advisory Board “Prayagraj Smart City Project”
2. Program Coordinator for Certificate course on “Machine Learning Big Data Analytics” at IIIT (CSTCP) & Talent Edge (Industry partner)- for working professionals
3. Member eMentor Team: IBM Great Mind Software Contest (2005-2007).

### **New Course Content generation**

1. Chairman of the committee “ Course structure and Syllabus creation M.Tech IT specialization in Data Engineering
2. Member of Advisory Board, New course Titled “M.tech in Data Science & Analytics” for the Department of Applied Science (Course structure & Syllabus).

### **Projects Completed/Undergoing**

1. Design and Development of Dimensionality Reduction Techniques for Cyber Physical Systems (ICPS Programme, DST) Ongoing
2. IOT based water quality assessment for river Ganga at Allahabad (IIIT-Allahabad) Completed
3. Development of Security Audit Framework for Secure IoT Network (IIT-Kanpur) Ongoing

### **Books**

"Applied Big Data Analytics in Operations Management" " by IGI Global publications, USA, September 2016. (**SCOPUS Indexed**)

### **Books Reviewed**

Chapter Review: Introduction to Languages and Theory of Computation, 3/e by John C.Martin, McGraw-Hill Education India Ltd.

### **Publications**

#### **List of Journal Publication (SCI/SCIE)**

1. Adarsh Prakash Bahera, Shekhar Verma and Manish Kumar. “WSN localization using similarity based ricci flow embedding”. *IEEE Systems Journal* (2021).1-10.

2. Adarsh Prakash Bahera, Shekhar Verma and Manish Kumar. "Data visualization through non linear dimensionality reduction using feature based ricci flow embedding". *Multimedia Tool and Applications* (2021). 1-21.
3. Kumar, Manish, Shekhar Verma, and Kusum Lata. "Secure data aggregation in wireless sensor networks using homomorphic encryption." *International Journal of Electronics* 102.4 (2015): 690-702
4. Prashant Kumar Shukla, Abhshek Singh, Shekhar Verma and Manish Kumar "A Rotation based Regularization Method for Semi-supervised Learning" accepted in *Pattern Analysis and Application* (2021): 1-19. (Impact Factor 1.512)
5. Prashant Kumar Shukla, Abhshek Singh, Shekhar Verma and Manish Kumar. "Interpreting SVM for medical images using Quadtree." *Multimedia Tool and Applications* (Volume 79) (2020): 29353–29373. (Impact Factor 2.313)
6. Adarsh Prakash Bahera, Abhshek Singh, Shekhar Verma and Manish Kumar. "Manifold Learning with Localized Procrustes Analysis Based WSN Localization." *IEEE Sensors Letters* (Early Access) (2020): 1-4.
7. Pal, Amrit, and Manish Kumar. "Distributed synthesized association mining for big transactional data." *Sāadhanā* (2020): 1-13. (Impact Factor: 0.849).
8. Shivhare, Anubhav, Vishal Krishna Singh, and Manish Kumar. "Anticomplementary Triangles for Efficient Coverage in Sensor Network-Based IoT." *IEEE Systems Journal* 14, no. 4 (2020): 4854-4863. (Impact Factor: 3.987).
9. Singh, Vivek Kumar, Bhoomika Nathani, and Manish Kumar. "WEED-MC: Wavelet Transform for Energy Efficient Data Gathering and Matrix Completion," *IEEE Transactions on Parallel and Distributed Systems* (2019): 1066-1073 (Impact Factor: 2.6).
10. Singh, Vivek Kumar, Shekhar Verma, and Manish Kumar. "Stream Processing With Concept Drift for Event Identification in Sensors Enabled IoT Environment ," *IEEE Sensors Journal* (2019): 12187 - 12195 (Impact Factor: 3.073).
11. Singh, Vishal Krishna, Vivek Kumar Singh, and Manish Kumar. "Network Health Monitoring of WSNs Using Node Loss Rate Calculations." *Wireless Personal Communications* (2019): 1-16 (Impact Factor: 1.2).
12. Singh, Vivek Kumar, Shekhar Verma, and Manish Kumar. "ODECS: An OnDemand Explosion-Based Compressed Sensing Using Random Walks in Wireless Sensor Networks." *IEEE Systems Journal* (2019) (Impact Factor: 4.337).
13. Pal, Amrit, and Manish Kumar. "DLME: Distributed Log Mining Using Ensemble Learning for Fault Prediction." *IEEE Systems Journal* (2019) (Impact Factor: 4.337).

14. Pal, Amrit, and Manish Kumar. "Pattern mining for large distributed dataset: A parallel approach (PMLDD)." *KSII Transactions on Internet & Information Systems* 12, no. 11 (2018) (Impact Factor: 0.611).
15. Pal, Amrit, and Manish Kumar. "Frequent Itemset Mining in Large Datasets a Survey." *International Journal of Information Retrieval Research (IJIRR)* 7, no. 4 (2017): 37-49.
16. Jain, Neeraj, Shekhar Verma, and Manish Kumar. "Low Cost Localization using Nyström Extended Locally Linear Embedding." *Pattern Recognition Letters* (2018).
17. Jain, Neeraj, Shekhar Verma, and Manish Kumar. "Patch based LLE with Selective Neighborhood for Node Localization." *IEEE Sensors Journal* (2018).
18. Vishal Krishna Singh, Manish Kumar, and Shekhar Verma. "Node Scheduling and Compressed Sampling for Event Reporting in WSNs." In *IEEE Transactions on Network Science and Engineering* (2018), Doi: 10.1109/TNSE.2018.2799845.
19. Vishal Krishna Singh and Manish Kumar 'In-network data processing in wireless sensor networks using compressed sensing', *Int. J. Sensor Networks* (2018), Vol. 26, No. 3, pp.174–189. (SCI) (Impact Factor- 0.454), Inder Science Publishers.
20. Vishal Krishna Singh, Manish Kumar and Shekhar Verma, "Accurate Detection of Important Events in WSNs," (2018) in *IEEE Systems Journal* (SCI) (Impact Factor- 3.854), vol. PP, no.99, pp. 1-10. Doi: 10.1109/JSYST.2017.2783353.
21. Singh, Vivek Kumar, Shekhar Verma, and Manish Kumar. "DBCS: A Decomposition Based Compressive Sensing for Event Oriented Wireless Sensor Networks." *Wireless Personal Communications* 99, no. 1 (2018): 351-369.
22. Singh, Vishal Krishna, Vivek Kumar Singh, and Manish Kumar. "In-Network Data Processing Based on Compressed Sensing in WSN: A Survey." *Wireless Personal Communications*: 1-38. (2017). doi:10.1007/s11277-017-4288-y. (Impact Factor: 0.951)
23. Singh, Vishal Krishna, Rahul Verma, and Manish Kumar. "Energy Efficient Event Detection Using Probabilistic Inference in Wireless Sensor Networks." *IETE Journal of Research* (2017): 1-11. (Impact Factor: 0.909)
24. Singh, Vishal Krishna, Gajendra Sharma, and Manish Kumar. "Compressed sensing based acoustic event detection in protected area networks with wireless multimedia sensors." *Multimedia Tools and Applications* 76, no. 18 (2017): 18531-18555. (Impact Factor: 1.530)
25. Singh, Vishal Krishna, Rahul Verma, and Manish Kumar. "Voronoi Neighbor Based Energy Efficient Event Detection in Wireless Sensor Networks." *AEU-International Journal of Electronics and Communications* (2017). (Impact Factor: 1.147)

26. Singh, Vishal Krishna, and Manish Kumar. "In-network data processing in wireless sensor networks using compressed sensing." *International Journal of Sensor Networks* 26, no. 3 (2018): 174-189.
27. Singh, Vishal Krishna, and Manish Kumar. "A Compressed Sensing Approach to Resolve the Energy Hole Problem in Large Scale WSNs." *Wireless Personal Communications* 99, no. 1 (2018): 185-201.
28. Jain, Neeraj, Shekhar Verma, and Manish Kumar. "Adaptive Locally Linear Embedding for Node Localization in Sensor Networks." *IEEE Sensors Journal* 17, no. 9 (2017): 2949-2956. (Impact factor: 2.512)
29. Jain, Neeraj, Shekhar Verma, and Manish Kumar. "Incremental LLE for Localization in Sensor Networks." *IEEE Sensors Journal* 17, no. 19 (2017): 6483-6492. (Impact factor: 2.512)
30. Singh, V.K., Singh, V.K. & Kumar, M., "In-Network Data Processing Based on Compressed Sensing in WSN: A Survey," *Wireless Personal Communication* (2017) 96: 2087. (Impact factor -0.957).

### **Scopus Indexed**

31. Singh, Vishal Krishna, and Manish Kumar. "Hierarchical compressed sensing for cluster based wireless sensor networks." *Int J Adv Comput Sci Appl* 1, no. 7 (2016): 58-67.
32. Sharma, Gajendra, Manish Kumar, and Shekhar Verma. "An Approach of Automatic Data Collection and Categorization." In *Artificial Intelligence and Evolutionary Computations in Engineering Systems*, pp. 527-536. Springer, Singapore, 2018. [Scopus Indexed]
33. G. Sharma, M. Kumar and S. Verma "realistic acoustic sensor network deployment and radio coverage in terrain profile using 3d modeling" accepted in Springer–Advances in Intelligence and Soft Computing (AISC) [Scopus Indexed]
34. Pal, Amrit, and Manish Kumar. "Frequent Itemset Mining in Large Datasets a Survey." *International Journal of Information Retrieval Research (IJIRR)* 7, no. 4 (2017): 37-49. [Scopus Indexed]
35. Kumar, Manish, Shekhar Verma, and Neerav Agarwal. "GMCA: a greedy multilevel clustering algorithm for data gathering in wireless sensor networks." *International Journal of Communication Networks and Distributed Systems* 11.2 (2013): 198-213.
36. Kumar, Manish, Santanu Das, and Sneha Govil. "Analysis of Stock Volatility Clustering Using ANN." *Information Resources Management Journal (IRMJ)* 28.2 (2015): 32-45
37. Kumar, Manish, and Sumit Kumar. "PATTERN GENERATION FOR COMPLEX DATA USING HYBRID MINING." *International Journal of Data Mining & Knowledge Management Process* 3.4 (2013): 127.

38. Kumar, Manish, Pritish Kumar Varadwaj, and Shekhar Verma. "Two-phase clustering based aggregation of sensor data." *International Journal of Data Mining, Modelling and Management* 2.3 (2010): 216-237.
39. Kumar, Manish, Monalisa Panigrahi, and Shekhar Verma. "XQuery based Query Processing Architecture in Wireless Sensor Networks." *International Journal of Computer Applications* 43.23 (2012). [Non Scopus]

### **List of Accepted Papers (International/National Conference)**

1. *Ashwin Raut, Anubhav Shivhare, Neetesh Purohit, Vijay Kumar Chaurasiya and Manish Kumar* "Improving Classification Accuracy Using Data Fusion Technique in IoT" in *International Conference on, Pacific Asia Conference on Information Systems (PACIS2021)*, July 12- 14, 2021.
2. *Tinku Singh, Riya Khanna, Satakshi Singh and Manish Kumar* "Multiclass Imbalanced Big Data Classification Utilizing Spark Cluster" in *12<sup>th</sup> International Conference on Computing Communication and Networking (ICCCNT 2021)*, July 6 - 8, 2021.
3. *Tinku Singh, Siddhant Bhisikar, Satakshi Singh and Manish Kumar* "Fingerprint Identification using Modified Capsule Network" in *12<sup>th</sup> International Conference on Computing Communication and Networking (ICCCNT 2021)*, July 6 - 8, 2021.
4. *Adarsh Prasad Behera, Sayli Godage, Shekhar Verma, and Manish Kumar* "Regularized Deep Convolutional Generative Adversarial Network" " in *International Conference on, IAPR International Conference on Computer Vision and Image Processing (CVIP2020)*, December 4-6, 2020.
5. *Tinku Singh, Ashwin Raut, Satakshi, Dhruv Agarwal, Rahul Jha, Anant Rai, and Manish Kumar* "Food Recommendation System using Neural Collaborative Filtering and Sentiment Analysis" " in *International Conference on, Advancements in Interdisciplinary Research (ICAIR2020)*, july 2020.
- 6.
7. *Singh, V.K., Shivhare, Anubhav and Manish Kumar*. "Sparse Matrix Completion for Effective Recommendation System" In *International Conference on VLSI, Communication and Signal Processing*, 2018.

8. Pal, Amrit, and Manish Kumar. "Applying Big Data Intelligence for Real Time Machine Fault Prediction." In International Conference on Big Data Analytics, pp. 376-391. Springer, Cham, 2018.
9. A. Pal, M. Kumar, "Pattern generation from event oriented sensor data using distributed sensor transaction model "MISNC-2017, 17-19 July, proceeding in ACM.
10. Singh, V.K., Verma, S. & Kumar, M., "Jellyfish Detection Using Wireless Sensor Networks," is accepted for publication in International Conference on Information and Communication Technology (CICT-2017), 3-5 November.
11. Singh, Vishal Krishna, Saurabh Verma, and Manish Kumar. "Privacy preserving in-network aggregation in wireless sensor networks." *Procedia Computer Science* 94 (2016): 216-223, 11th International Conference on Future Networks and Communications (FNC-2016).
12. Singh, Vishal Krishna, Ankur Kumar Rai, and Manish Kumar. "Sparse Data Recovery using Optimized Orthogonal Matching Pursuit for WSNs." *Procedia Computer Science* 109 (2017): 210-216, ANT-2017, 17-19 May.
13. Singh, Vishal Krishna., Ajit Singh, and Manish Kumar. "Data aggregation based link loss inference in wireless sensor networks." In *Electrical Computer and Electronics (UPCON), 2015 IEEE UP Section Conference on*, pp. 1-5. IEEE, 2015.
14. Jain, Neeraj, Shekhar Verma, and Manish Kumar. "Locally linear embedding for node localization in wireless sensor networks." In *Computational Intelligence and Communication Networks (CICN), 2015 International Conference on*, pp. 126-130. IEEE, 2015.
15. G. Sharma, M. Kumar and S. Verma, "Monitoring deforestation using acoustic signals," 2016 International Conference on Bioinformatics and Systems Biology (BSB), Allahabad, 2016, pp. 1-4.
16. "Combined mining approach to generate patterns for complex data, " in International conference on computer science and information technology, February 18-20, 2013, Bangalore.
17. "Rule extraction in Health care data, " in National Seminar on Data Mining in Health Care (supported by CSIR), June 1-2, 2013, IIIT, Allahabad.
18. "Quantitative Trait Loci (QTL) Database Analysis for Finding Association among Traits," in International Conference on Bioinformatics and System Biology, 19-21 Feb 2010.
19. Published in IEEE Xplore paper titled "Clustering approach to Data Aggregation in Wireless Sensor Networks," in ICON-2008, 12-14 December, 2008, IIT Roorkee.
20. Published in IEEE Xplore paper titled "Data Clustering in Sensor Networks using ART," in WCSN 2008, 27-29 December, 2008, IIIT-Allahabad.



21. Publiised in IEEE Xplore paper titled "Querying video sensor networks, " in WCSN- 2007, 11-15 December 2007, IIIT-Allahabad.

## **Editor/Reviewer of Following Refereed Journals**

**Area Editor-***EAI* Endorsed Transactions on Cloud System

### **Reviewers:**

- Systems Journal, Elsevier.
- IETE Journal of Research - Taylor & Francis.
- Sadhana – Springer.
- Wireless Personal Communications (Impact Factor: 1.2).
- IEEE Systems Journal (Impact Factor: 4.337).
- KSII Transactions on Internet & Information Systems (Impact Factor: 0.611).
- International Journal of Information Retrieval Research (IJIRR)
- Pattern Recognition Letters
- IEEE Sensors Journal
- IEEE Transactions on Network Science and Engineering
- Multimedia Tools and Applications (Impact Factor: 1.530)
- IETE Journal of Research (Impact Factor: 0.909)
- AEU-International Journal of Electronics and Communications (Impact Factor: 1.147)
- International Journal of Sensor Networks
- International Journal of Electronics

### **Book Chapters**

1. "Optimizing Software Error Proneness Prediction Using Bird-Mating Algorithm" accepted for publication in book "Software Project Management for Distributed Computing: Life-Cycle Methods for Developing Scalable and Reliable Tools." Springer(2016)
2. "Predictive Analytics in Operations Management" for the book "Applied Big Data Analytics in Operations Management (2016):68." under the IGI-Global publisher, USA. (2016)
3. "Collaborative Filtering Based Data Mining for Large Data" for the book "Collaborative Filtering Based Data Mining for Large Data (2016):115" under the IGI-Global publisher, USA. (2016)
4. "Rules Extraction using Data Mining in Historical Data" for the book "Business Intelligence: Concepts, Methodologies, Tools, and Applications (2015):263" under the IGI-Global publisher, USA. (2015)
5. "Rule optimization of Web-logs data using Evolutionary Technique" for the book "Research Methods: Concepts, Methodologies, Tools, and Applications (2015):158" IGI-Global publisher, USA (2015)

6. "Rules Extraction using data mining in Historical data" for the book "Data mining and Analysis in engineering field" (2014):89. [IGI-Global publisher, USA]
7. "Applications of data mining in social network analysis" for the book "Data mining in Dynamic Social Networks and Fuzzy Systems (2013), pp. 110-121." under the IGI-Global publisher, USA. (2013)

### **Invited Talks**

1. "MapReduce Framework", Workshop on "Big Data Technologies", 21 - 25 June, 2021, Tula's Institute (The Engineering & Management College) Dhoolkot, Dehradun. (Online Mode)
2. "Introduction to DM & Association Mining", Workshop on "Machine learning and Data Analytics (MLDA-2021)", 28 May - 11 June, 2021 IIIT, Allahabad. (Online Mode)
3. "Classification-DT, Bayesian", Workshop on "Machine learning and Data Analytics (MLDA-2021)", 28 May - 11 June, 2021 IIIT, Allahabad. (Online Mode)
4. "Hierarchical and Density based Clustering of large data", Workshop on "Machine learning and Data Analytics (MLDA-2021)", 28 May - 11 June, 2021 IIIT, Allahabad. (Online Mode)
5. "Big Data Analytics (MR, Spark)", Workshop on "Machine learning and Data Analytics (MLDA-2021)", 28 May - 11 June, 2021 IIIT, Allahabad. (Online Mode)
6. "Clustering of Large Data/Big Data", AICTE sponsored One Week Short Term Training Programme (STTP) on "Data science and Machine learning", 28<sup>th</sup> May, 2021, Narula Institute of Technology, Agarpara, Kolkata. (Online Mode)
7. "Big data: Challenges and perspective", Webinar on "Computer Society of India, Webinar Series-49" , 21 March 2021, Allahabad. (Online Mode).
8. "Hierarchical clustering", Faculty Development Programme (ATAL-AICTE) on "Machine Learning and Optimization", 1 - 5 February, 2021, IIIT- Allahabad, Prayaagraj. (Online Mode)
9. "Database Management in Mobile Computing/Sensor Network", Faculty Development Programme on "Artificial Intelligence and Ambient Intelligence – Phase 1", 25<sup>th</sup> January to 6<sup>th</sup> February 2021, Hindustan Institute of Technology and Science , Chennai. (Online Mode)
10. "Clustering for IoT Data", Faculty Development Programme (ATAL-AICTE) on "Data Science for IoT", 9- 13 October, 2020, IIIT- Allahabad, Prayaagraj. (Online Mode)
11. "Time Series Data Clustering", Workshop on "Time Series Data Analysis (TSDA-2020)", 28<sup>th</sup> -29<sup>th</sup> August, 2020, IIIT- Allahabad, Prayaagraj. (Online Mode)
12. "Session Chair", International Conference on "Advancements in Interdisciplinary Research(ICAIR 2020)" , July 24 – 26, 2020, FIRMS India and B. M. College, Rajasthan University, Jaipur. (Online Mode).
13. "Database Management in Mobile Computing Environment", Seminar on "Emerging Trends in Networking", VIT Chennai on 20th January 2020.
14. "Data Mining" expert lecture at BIT- Mesra, Ranchi, Jharkhand (Online Mode)

15. “Advanced Database Technology, Expert Lecture at United Engineering College, Prayaagraj, UP (Online Mode)
16. “Big Data Algorithm”, Faculty Development Programme (ATAL-AICTE) on “Data Sciences” , 8th-12th November, 2019, IIIT- Allahabad, Prayaagraj.
17. “Mining data”, Faculty Development Programme (ATAL-AICTE) on “Data Sciences” , 8th-12th November, 2019, IIIT- Allahabad, Prayaagraj.
18. “Distributed Database Systems”, Faculty Development Programme on “Blockchain” , 21st-25th October, 2019, IIIT- Allahabad, Prayaagraj.
19. “Distributed Database”, Workshop on "Big Data Analytics and Machine Learning" , 19th-22nd October, 2019 Global Academy of Technology, Bangalore.
20. “Distributed Database and Consensus Protocols ”, Workshop on "Block Chain" , 16th September to 20th September, 2019 MNNIT- Allahabad, Prayaagraj.
21. “Data Management in Mobile Computing”, Faculty Development Programme on "Emerging Trends in Networking", 24 June - 28 June, 2019 Centre for Advanced Studies, AKTU, Lucknow.
22. “Big Data Mining and Multi Relational Data Mining", Workshop on "Machine Learning & Data Analytics 2019" , 25 May - 31 May, 2019 IIIT Allahabad.
23. “New Trends in Wireless Sensor Networks", Technical Education Quality Improvement Programme on "Advances in Wireless and Optical Networks" , 27 May - 01 June, 2019 Rajkiya Engineering College, Azamgarh, UP.
24. “Data Management in Mobile Computing", International Conference on "Knowledge & Policy for Sustainable Development: Global Lessons and Local Challenges" from 25th September to 27th September, 2019 at GGS Indraprastha University, Delhi.
25. “Mining Data and Big data algorithms” International Conference on “MACHINE INTELLIGENCE AND SIGNAL PROCESSING, MISP-2019” from September 7-10, 2019, IIIT- Allahabad, Prayagraj.
26. “Current Trends in Integration of IoT with Blockchain Technology” from 11th March to 15th March, 2019 under TEQIP-III at Rajkiya Engineering College, Azamgarh, UP.
27. “Advancement in Machine Learning for Business Intelligence: Concepts, Techniques and Applications” during Feb. 26-Mar.02, 2019 at I.E.R.T. Prayagraj.
28. “Lecture on e-Learning” on 11th February, 2019, in workshop of Faculty Development Centre sponsored by MHRD.
29. “Big Data in Life Sciences and Healthcare (BDLSH-2019)”, 12 - 13 of February, 2019 at Amity University Uttar Pradesh, Lucknow Campus.
30. “Data Mining Algorithms-Large Enough”, Faculty Development Programme on "Data Mining”, 1 June – 6 June, 2018 Shambhunath Institute of Engineering & Technology, Allahabad.

31. "Data management in Mobile Computing", Faculty Development Program on "Advance Computer Network", 1 May - 5 May, 2018 United College of Engineering and Research, Allahabad.
32. "Parallel and Distributed Data Stream Mining" under the aegis of GIAN (Global Initiatives of Academic Networks) sponsored by MHRD (Ministry of Human Resource Development), 19 -23 December 2017 at Indian Institute of Information Technology, Allahabad.
33. "Mining Big Data", Workshop on "Machine learning and Data Analytics (MLDA-2017)", 13 July - 18 July, 2017 IIIT, Allahabad.
34. "Social Network Analysis", Workshop on "Machine learning and Data Analytics (MLDA-2017)", 13 July - 18 July, 2017 IIIT, Allahabad.
35. "IoT and Wireless Sensor Networks", Short Term Course on "Workshop on Antenna Design and Signal Processing Techniques for 5G Networks and IoT" (ADSPNIT-2017), 27 Feb - 4 March, 2017 MNNIT, Allahabad.
36. "Mining Large Data", Short Term Course on "Workshop on Emerging Trends in Communication & Information Technology" (COMMIT-2017), 30 Jan - 3 Feb, 2017 SHUATS, Allahabad.
37. Keynote Speaker, in on "International workshop on Role of technological advances, incubation themes and engineering skills (TAITES-2016)", at CIT Kokarajhar, Assam, 21-23 January, 2016.
38. Advances in database management systems", in on "Inservice course of PGT (CS) of Kendriya Vidyalaya Sangathan", Allahabad, 26th May 2016.
39. Keynote Speaker, in on "National workshop on Creation and Establishment of Virtual Classroom and e-Learning", at SHIATS Allahabad, 5-6 May, 2015.
40. "Data Management in mobile computing", Short Term Course on "Mobile, Ad hoc and Vehicular Communication" (MAVECOM-2013), July 22-27, 2013 MNNIT, Allahabad.
41. "Database Systems" in "Workshop on AFRES and PRIME", held at Headquarter North Central Railway-Allahabad during 24-28 January 2011.
42. "Application of Database Management Systems in Agriculture" in "National Training program on Trends in Bioinformatics and Computation Systems: Exploring Interconnections for Molecular Biological Applications", under "National Agriculture Innovation Project", 16-29 July 2011 at National Bureau of Agriculturally Important Microorganisms (NBAIM), Mau. U.P.
43. "Multidimensional modeling and data mining application" in "Short term course on Data Digitization, Data Warehousing & Data Mining" in 24-28th 2009 supported by DIT,MCIT,GOI organized by IIIT, Allahabad.
44. "Data management in Wireless Sensor Networks" in "pre-conference Workshop of WCSN", 11-15 December 2007 at IIIT-Allahabad.

45. "Database Technology", Finishing school for engineering students June 1-July 15, 2008 IIIT-Allahabad.

### **Workshop/Short term courses organized**

1. Coordinator of workshop titled as 'Faculty Development Programme on Data Science for IoT' (9-13 Oct, 2020) in IIIT Allahabad.
2. Coordinator of workshop titled as 'Self-Financed Course-cum Workshop on "Time Series Data Analysis' (28-29 August, 2020) in IIIT Allahabad.
3. Coordinator of workshop titled as 'Faculty Development Programme on Data Science' (8-12 Nov, 2019) in IIIT Allahabad.
4. Coordinator of CSIR and DST-SERB sponsored workshop titled as 'Workshop on Machine Learning and Data Analytics (MLDA)-2019' (25-31 st May) in IIIT Allahabad.
5. Coordinator of workshop titled as 'Workshop on Machine Learning and Data Analytics (MLDA) - June 2018' held in IIIT-Allahabad.
6. Coordinator of CSIR and DST sponsored workshop titled as 'Workshop on Machine Learning and Data Analytics (MLDA) - July 2017' held in IIIT-Allahabad.
7. Coordinator of DST-CSIR sponsored workshop on "Machine learning and Data analytics" 13 July-18 July 2017 at IIIT Allahabad.
8. Coordinator of IEEE Workshop on Computational Intelligence, 13-15<sup>th</sup> October 2014
9. Co-coordinator of "Finishing school for engineering students", A training program held during June 1-July 15, 2008 at IIIT-Allahabad.

### **Conference/workshop/seminar (Program Committee member)**

1. Session chair of VCAS 2020: Third International Conference on VLSI, Communication, and Signal Processing held at MNNIT Allahabad in October 2020.
2. Session chair of International Conference on Advancements in Interdisciplinary Research (ICAIR2020) held at IIIT Allahabad in July, 2020 December 2011.
3. Organizing committee member of International conference on Wireless Communication and Sensor Networks held at IIIT Allahabad in 15-19<sup>th</sup> December 2011.
4. Organizing committee member of International conference on Wireless Communication and Sensor Networks held at IIIT Allahabad in 15-19<sup>th</sup> December 2010.
5. Organizing committee member of International conference on Wireless Communication and Sensor Networks held at IIIT Allahabad in 15-19<sup>th</sup> December 2009.
6. Organizing committee member of Science Conclave for Nobel Laureates held at IIIT Allahabad in 8-14<sup>th</sup> December 2009.

7. Organizing committee member of Science Conclave for Nobel Laureates held at IIIT Allahabad in December 2008.
8. Organizing committee member of International conference on Wireless Communication and Sensor Networks held at IIIT Allahabad in December 2008.
9. Organizing committee member of International conference on Wireless Communication and Sensor Networks held at IIIT Allahabad in December 2007.
10. Organizing committee member of International conference on Wireless Communication and Sensor Networks held at IIIT Allahabad in December 2006.
11. Organizing committee member of All India VC Conference held at IIIT Allahabad in November 2005.
12. Participated in “International seminar on Empowering Visually Impaired Through ICT” April 15-16, 2009 at RGIIT, Amethi.
14. Attended National Workshop on NPTEL (National Programme for technology Enhanced Learning) on 27-28<sup>th</sup> June 2007 at IIT, Kanpur.
15. Attended “International conference of forum of scientists from south and south East Asia on: Capacity building in science and technology, policy perspective, opportunities and challenges in the context of globalization. 27-29<sup>th</sup> November 2007, INSA( Indian National Science Academy) , New Delhi
16. Attended “National Seminar on Empowering Rural Health Through ICT” (at RGIIT-Amethi (a campus of IIIT-Allahabad)), 19-20 Aug 2007
17. Participated in International conference cum workshop on 4G mobile technology held at Birla Institute of Technology, Mesra, Extension Centre, Noida in December 2004.

**Avocation:** Visiting places, watching games, Reading books

**Other Activities and Achievement:**

Batch **Topper** in M. Tech (Computer Science)

**Third Topper** of University in Graduation.

Sub-regional sports meet of **Kendriya Vidyalaya Sanghatan** in **Football**

Participant in **University Athletics meet** 1999-2000 of **B.I.T, Mesra** (deemed university) and got **1<sup>st</sup> position** in **Long jump**.

Participated in first **Chancellor Cup Volleyball** Tournament held in Ranchi University, Ranchi

Played for **University Cricket Team** in 1999-2000.

(**Manish Kumar**)