

SUNANDA

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WORK EXPERIENCE

- 08/2004 to 04/2005 **Lecturer**
G.G.M. Science College-Jammu, Jammu And Kashmir
- 05/2005 to 07/2012 **Assistant Professor –Stage I**
*School of Computer Science & Engineering,
Shri Mata Vaishno Devi –Jammu, Jammu And Kashmir*
- 08/2012 to 07/2017 **Assistant Professor – Stage II**
*School of Computer Science & Engineering,
Shri Mata Vaishno Devi –Jammu, Jammu And Kashmir*
- 05/2017 to till date **Assistant Professor – Stage III**
*School of Computer Science & Engineering,
Shri Mata Vaishno Devi –Jammu, Jammu And Kashmir*

EDUCATION

- **Ph.D. (Domain: Algorithm Optimization)**
Shri Mata Vaishno Devi University (2014)
- **Masters in Computer Applications**
University of Jammu (2003)
- **Graduation (B.Sc. Non Medical)**
University of Jammu (2000)
- **Higher Secondary (12th standard)**
M.H.A.C School Nagbani, Jammu.(1997)

- **Matriculation**

M.H.A.C School Nagbani, Jammu - (1995)

JOURNAL PUBLICATIONS [SCI/SCIE/UGC CARE LIST/ SCOPUS]

1. Kour, Navleen, Sunanda Gupta, and Sakshi Arora. "Sensor technology with gait as a diagnostic tool for assessment of Parkinson's disease: a survey." *Multimedia Tools and Applications* 82.7 (2023): 10211-10247. ISSN 1573-7721 [SCIE IF: 2.577]
2. Bakshi, A., & Gupta, S. (2022). Face Anti-Spoofing System using Motion and Similarity Feature Elimination under Spoof Attacks. *INTERNATIONAL ARAB JOURNAL OF INFORMATION TECHNOLOGY*, 19(5), 747-758. ISSN : 16833198, IF: 0.967 [SCIE]
3. S. Kumar, S. Gupta, and S. Arora, "Research Trends in Network-Based Intrusion Detection Systems: A Review", in *IEEE Access*, vol. 9, pp. 157761-157779, 2021, DOI: [10.1109/ACCESS.2021.3129775](https://doi.org/10.1109/ACCESS.2021.3129775). ISSN: 2169-3536 IF: 3.476 [SCI-E] IF: 3.367
4. Kumar, Satish, Gupta, Sunanda, and Arora, Sakshi. 'A Comparative Simulation of Normalization Methods for Machine Learning-based Intrusion Detection Systems Using KDD Cup'99 Dataset'. *Journal of Intelligent & Fuzzy Systems* 42 (2022) (IOS Press) 1 Jan. 2022: 1749 – 1766. DOI:[10.3233/JIFS-211191](https://doi.org/10.3233/JIFS-211191) ISSN: 1875- 8967 [SCI-E] IF:1.737
5. Kour, N., Gupta, S., & Arora, S. A vision-based clinical analysis for classification of knee osteoarthritis, Parkinson's disease and normal gait with severity based on k-nearest neighbour. *Expert Systems* 2022, 39.6, e12955 ISSN: 0266-4720. [SCI-E] IF:2.812
6. Bakshi, A., & Gupta, S. (2022). An efficient face anti-spoofing and detection model using image quality assessment parameters. *Multimedia Tools and Applications*, 81(24), 35047-35068. ISSN 1573-7721 [SCIE IF: 2.577]
7. Bakshi, Aditya, Sunanda Gupta, Akhil Gupta, Sudeep Tanwar, and Kuei-Fang Hsiao. "3T-FASDM: Linear discriminant analysis-based three-tier face anti-spoofing detection model using support vector machine." *International Journal of Communication Systems*. Wiley, 2020, vol 33, issue 12 <https://doi.org/10.1002/dac.4441> ISSN:1099-1131 IF : 1.882 [SCI-E]
8. Kour, Navleen, Sunanda Gupta, and Sakshi Arora. "A Survey of Knee Osteoarthritis Assessment Based on Gait." *Archives of Computational Methods in Engineering*: Vol 28, 345-385, 2021 ISSN: 1134-3060 , IF: 8.967 [SCI]. xxxxxx

9. Kour, Navleen, Sunanda, and Sakshi Arora. "Computer-Vision Based Diagnosis of Parkinson's Disease via Gait: A Survey." *IEEE Access* 7 (2019): 156620-156645 ISSN: 2169-3536 IF: 3.476 [SCI] .
10. Sharma Cheena, Sunanda," Survey on Smart Healthcare: An application of IoT", International Journal on emerging technologies, 330-333 8(1), 2017. ISSN: 0975-8364 [UGC care list No: 212]
11. Sunanda, Arora Sakshi, " A Review of Data Mining Issues in Cloud Environment", Journal of Computer and Mathematical Sciences", Vol.No. 6, 320- 325, (2017) (ISSN: 23198133). [UGC care list No: 44720] IF: 6.723
12. Boosting Simulated Annealing With Fitness Landscape Parameters for Better Optimality. International Journal of Computing, 14(2), 107-112, 2015 (h-index: 8) ISSN: 2312-5381[Scopus]
13. Arora Sakshi & Sunanda, "Genetic K-Means Clustering for Route Discovery in MultiCastNetworks", International Journal of Control Theory and Applications, Vol. 10 (4), 49-56 (2017) ISSN: **0974-5572** [Scopus].
14. Arora Sakshi & Sunanda, "Virtual Machine Availability and Load Balancing in Cloud Environment", International Journal of Control Theory and Applications, Vol. 10 (4), 183-190 (2017) ISSN: 0974-5572 [Scopus] .
15. Gupta, S., &Garg, M. L. (2013). Binary trie coding scheme: an intelligent genetic algorithm avoiding premature convergence. International journal of computer mathematics, 90(5), 881-902. ISSN: 0020-7160 IF : 1.75 [SCI]
16. Gupta, Sunanda., and Garg,M.L. "An Improved Genetic Algorithm Based on Adaptive Repair Operator for Solving the Knapsack Problem." Journal of Computer Science 5.8 (2009): 544-547 (SJR: 0.3) ISSN: 1549 -3636 IF 0.94[Scopus]

BOOK CHAPTERS [SCOPUS]

1. Gupta, Shivangi, and Sunanda Gupta. "Using Deep Learning: A Review." *Advances in Data and Information Proceedings of ICDIS 2022* (2022) pages, 173-183 ISBN: 978-981-19-5291-3 [Scopus].
2. Kour, Navleen, and Sakshi Arora. "A Vision-Based Gait Dataset for Knee Osteoarthritis and Parkinson's Disease Analysis with Severity Levels." International Conference on Innovative Computing and Communications. Springer, Singapore, 2022. Advances in Intelligent Systems and Computing (Springer).Volume: 2,ISSN: 2194-5357 [Scopus]
3. Gupta P., Kaushik B., Sunanda (2020) Suicidal Tendency on Social Media by Using Text Mining. In: Singh P., Sood S., Kumar Y., Paprzycki M., Pljonkin A., Hong WC. (eds) Futuristic Trends in

- Networks and Computing Technologies. FTNCT 2019. Communications in Computer and Information Science, vol 1206. Springer, Singapore [Scopus]
4. Kumar S., Sunanda, Arora S. (2020) A Statistical Analysis on KDD Cup'99 Dataset for the Network Intrusion Detection System. In: M. Thampi S. et al. (eds) Applied Soft Computing and Communication Networks. ACN 2019. Lecture Notes in Networks and Systems, vol 125. Springer, Singapore [Scopus]
 5. Sharma, Cheena, Sunanda "Performance Analysis of ECC and RSA for Securing CoAP-Based Remote Health Monitoring System." Ambient Communications and Computer Systems. Springer, Singapore, 2018. 615-628 ISSN: 2367-3370 [Scopus]
 6. Bakshi Aditya, Sunanda, A Comparative Analysis of Different Intrusion Detection Techniques in Cloud Computing”, Advanced Informatics for Computing Research, 358-378, CCIS series, vol (956), 2018 ISSN: 1865-0929.[Scopus]
 7. Bal, Rausheen, Aditya Bakshi, and Sunanda Gupta. "Performance Evaluation of Optimization Techniques with Vector Quantization Used for Image Compression." Harmony Search and Nature Inspired Optimization Algorithms. Springer, Singapore, 2019. 879-888. ISSN: 2194-5357 [Scopus]
 8. Arora Sakshi, Sunanda, “Effect of the Core Selection Strategy in Determining the Optimum BDMST in Multicast Networks”, Advances in Computer Science and Information Technology Vol (2),2, (2015) (ISSN 2393-9907) pp. 249-251.
 9. Gupta, Sunanda., and Garg,M.L, “Diversity Maintenance Perspective: An Analysis of Exploratory Power and Function Optimization in Context of Adaptive Genetic Algorithms.” Advances in Intelligent Systems and Computing, Springer (ISSN: 2194-5357) (2014).[Scopus]

BOOK CHAPTERS [JOURNAL PUBLICATIONS NON SCOPUS/ NON SCI]

1. Khajuria Rakshit, Sunanda, Singh Sidharth, “A Survey of Existing Leaf Disease Detection Techniques using Artificial Neural Network”, International Journal of Computer Trends and Technology, Vol 59, Issue 1, 52-62,2018 ISSN : 2347 - 8578 ..
2. Revdikar Laxmikant, Mittal Ayush, Sharma Anuj, Sunanda, “A Naïve Breadth First Search Approach Incorporating Parallel Processing Technique For Optimal Network Traversal”, International Journal of Advanced Research in Computer and Communication Engineering Vol (5), 5, 2016. (ISSN: 2319-5940)
3. Gupta, Sunanda., and Garg,M.L. "GA implementation of the multi dimensional knapsack problem using compressed binary tries." Advances in Computational Research 1.2 (2009), pp. 43-46. ISSN: 0975-3273 (IF: 0.476)

4. Sudesh Kumar, Sakshi Arora, Sunanda, “Light-Fidelity: Next Generation Wireless Networks- A Survey, Proceedings of 2019 International Conference on Smart Systems and Inventive Technology (ICSSIT) IEEE Xplore digital library, pages: 668-671, DOI: [10.1109/ICSSIT46314.2019.8987757](https://doi.org/10.1109/ICSSIT46314.2019.8987757) ISSN: 978-1-7281-2119-2 [Scopus].
5. Security in Cloud Computing”, International Journal of Advance Research in Science and Engineering”, Vol.No. 5, 280-285 (2016) (ISSN: 2319-8346).
6. Sunanda, Arora, S. (2015, September). An Archive Enhanced Hybrid Genetic Algorithm for Shortest Path Routing Problem. In *Proceedings of the Sixth International Conference on Computer and Communication Technology 2015* (pp. 147-151). ACM. ISBN: 978-1-4503-3552-2

CONFERENCE PUBLICATIONS/PRESENTATIONS

1. Presented paper titled “A Naïve Performance Metric Parameter for Intrusion Detection System Model” during 6th International Conference on Recent Innovations in Computing Organized by Central University of Jammu organized by Central University of Jammu from 26.10.23- 27.10.23
2. Presented paper titled “Heart Disease Prediction and Severity Level Classification: A Machine Learning Approach with Feature Selection Techniques” in the fourteenth International Conference on Computing, Communication and Networking Technologies, held at IIT Delhi during 6th-8th July 2023.
3. Presented paper titled “Face Misclassification Detection Using Facial Landmark Features” at 3rd International Conference on Computing, Communication and Cyber Security (IC4S-2021) from 30^h to 31st October 2021.
4. Presented paper titled, “Comprehensive Review on CNN based Malware Code Detection with Hybrid Optimization Algorithm” in the International conference on Fourth industrial revolution based technology and practices”, Quantum university, Roorkee , india 26th march -27th march 2021.
5. Presented paper titled “A Computer Vision Based Approach Towards Evaluation of Knee Osteoarthritis and Parkinsons Disease via GAIT Analysis” at 6th International Conference on Recent Trends & Advancement in Engineering and Technology from 17th to 18th January 2020.
6. Presented paper titled “A Taxonomy on Biometric Security and its Applications” in the international conference on Innovations in Information and Communication Technologies held in I.T. S College, Ghaziabad on 7th-8th November, 2020.
7. Presented paper titled “ A Survey of Gait Analysis Techniques for Identification of Parkinson’s Disease”, International Conference on Mathematical Sciences and Computational Intelligence (ICMSCI-2020) (21-22 December 2020)

8. Presented paper titled “Sentiment Analysis of Tweets and Customer Reviews: A Survey of Techniques” , AICTE sponsored International Conference on Computational Methods in Science & Technology held on 11th to 12th June 2020 at Chandigarh Engineering College (page No. 145-148) published in journal of Natural Remedies.
9. Swarm Intelligence Based Nature Inspired Metaheuristics Used for Selecting Features in Opinion Mining - International Conference on Innovative Computing and Communication (ICICC 2020).
10. “Light Fidelity: Next Generation Wireless Networks – A Survey”, 2nd International Conference on Smart Systems & Inventive Technology (ICSSITX 2019) organized by Francis Xavier Engineering College 27th -29th Nov. 2019, Tirunelveli, India.
11. “A Survey on the State of Art Approaches Used in Intrusion Detection System” , (165-176), International Conference on Machine Learning and Computational Intelligence, 28th -29th Sep.2017
12. “Enhanced Genetic Algorithm with Memory Scheme for Vehicle Routing Problem “,3rd International Conference on Recent Trends and Advancements in Engineering and Technology 2016 (17-18 November).
13. “Secure Energy Efficient e-Health Monitoring System “,3rd International Conference on Recent Trends and Advancements in Engineering and Technology 2016 (17-18 November).
14. “Cloud for Data Mining: Issues and Challenges”, International Conference on Advancements in Engineering and Technology, Sangrur, 18th -19th March, 2016
15. “Making Governments Digital India Mission Workable by Ensuring Security of a Wireless Network in a Mobile Adhoc Network Environment”, National Seminar on Economics of Make in India, September 2015.
16. “An Archive Enhanced Hybrid Genetic Algorithm for Shortest Path Routing Problem” , International conference on computer and communication technology, MNIT Allahabad, September 25th -27th 2015.
17. “Mobile Agent Based Approaches for Fault Tolerance” 2nd National Conference on Emerging Principles & Practices of Computer Science & Information Technology (EPCSIT’09) 4th Sept - 5th Sept 2009.
18. “Role of IT in Developing Countries” National Conference on India and Other Emerging Economies (BRIC) – A Comparative study” held on October 24,2007.
19. “Correlating Information Technology and National Development in Indian Context” at National Conference on India and Other Emerging Economies – A Comparative study” held on October 24,2007.
20. “Effect of Different Topologies on PageRank” at IETE Conference in collaboration with Shri Mata Vaishno Devi University 2006.

21. “Computer Simulation and Queues” at Indian Science Congress hosted by Nirma University 2005 .
22. “Study of queues through computer simulation” at Ist JK Science Congress, University of Jammu 7-9 February, 2005.

EDITED A BOOK

Proceedings of National Conference on Information Technology and Business Analytics (NCITBA 2017) ISBN: 978-93-82974-57-4

RESEARCH GUIDED

- ***Ph.D. Supervision***

- ***04 Candidates registered***

- ***(3 candidates Awarded and 1 candidate Pursuing).***

- *Ms. Navleen Kour (17DCS014) “A Vision Based Approach for classification of Abnormal and Normal Gait using Effective Learning Models”*

- *Mr. Aditya Bakshi (15DCS001) “A Secure Face Recognition System with Spoofing Detection Using Image Quality Assessment Parameters”*

- *Mr. Satish Kumar (16DCS005) “ A Hybrid Feature Selection Approach For Network Intrusion Detection with Classifier Optimization Based on Bacterial Foraging”*

- ***Master’s Thesis Supervision***

- *07 Candidates awarded Degree*

MASTER’S THESIS TITLES

1. Sobia Mir 21MMS009, “HEART DISEASE PREDICTION USING MACHINE LEARNING ALGORITHMS AND FEATURE SELECTION
2. Shivangi Gupta 20MMS015, “DETECTION OF COVID USING DEEP LEARNING APPROACH”
3. Arshi Kumari, 19MMS004, “Detection of Malicious Code Variant Based on CNN Algorithm”
4. Nupur Bali, 18MMS018 “Sentiment Analysis Using Hybrid Firefly and Cuckoo Search Optimization for Efficient Feature Selection”.
5. Priyanka Gupta 17MMS015, “Suicidal Tendency on Social Media”.
6. Rakshit Khajuria 16MMS005, “Leaf Disease Detection Using Artificial Neural Network”
7. Cheena Sharma 15MMS015, “Enhancing Security of IoT Healthcare Using Secure CoAP”.

MOOC CERTIFICATIONS

1. Professional Development Programme on Implementation of NEP 2020 for University and College Teachers, 12.6.23-18.6.23, from IGNOU passed with Grade 'A'.
2. Swayam Online Course Certification "Programming in Python" February 2023 from Dibrugarh University, Passed with 87%.
3. NPTEL Online certification "Introduction to Machine Learning" July-Sep. 2022 from IIT Kharagpur, Passed with 71%
4. NPTEL online certification course on Demystifying Networks (4 week course July-Aug 2021) consolidated score 60% .
5. Course era course on Machine Learning for All, offered by University of London. Consolidate score 100%. (July 2020)
6. NPTEL online certification course on Designing Learner Centric MOOCs (4 week course Jul-Aug 2019) consolidated score 65% .
7. NPTEL online certification course on Problem solving Through Programming in C (12 week course Jan-April 2019) consolidated score 80% .
8. Course era course on Fundamentals of Digital Image & Video Processing, offered by Northwestern University. Consolidate score 76.2%. (May 2019)
9. Course era course on Cybersecurity & Mobility, offered by University System of Georgia. Consolidate score 86.9%. (March 2017)

ONLINE RESOURCES

1. Kour, N., Gupta, S., & Arora, S. (2020). Gait dataset for knee osteoarthritis and Parkinson's disease analysis with severity levels. Mendeley Data, V1. <https://doi.org/10.17632/44pfny89.1>
2. Kumar Sudesh, Sunanda (2022). SDN-TCP-SYN ATTACK-DDOS DATASET
<https://data.mendeley.com/datasets/236bd4cjm/2>

INDUSTRIAL TRAINING

1. Two weeks of Industrial Training with the IT division of Jammu Smart City Ltd. from 5th June 2023 till 17th June 2023

FACULTY DEVELOPMENT PROGRAMMES

1. Attended 8 Days Online Training Program on NEP Orientation and Sensitization organized by UGC Malviya Mission Teacher Training Centre SMVDU from 8.1.24 – 17.1.24 (Online mode)

2. One Week FDP on “Big Data and Analytics” organized by Deptt. Of Information Technology, DR BR Ambedkra NIT Jalandhar from 3.4.23 to 7.4.23.
3. 10-Day Online FDP on “Randomized and Approximation Algorithms” sponsored by Ministry of Electronics and Information Technology (MeitY) GoI, organized by E&ICT Academy, NIT Warangal and Department of Computer Science and Engineering, 20-30th May 2023.
4. Online Training Program on “ Data Science & Its Applications” organized by Electronics & ICT Academy, NIT Patna, held from March 01- March 08, 2022 in online mode under the “Scheme of Financial Assistance for setting up of Electronics & ICT Academies” by the Ministry of Electronics and Information Technology (MeitY), Govt. of India.
5. FDP on Exampelary practices in Teaching-Learning and Evaluation of Courses in Computer Science and Information Technology organized by Visvesvarya Technological University, Belagavi, Indian Institute of Information Technology, Uttar Pradeshin association with IIT Allahabad from Aug 3 to Aug 7, 2020.
6. Five days FDP on “Contemporary Research Trends in Electronics & Communications, amd Computer Science”organized by Department of Electronics & Communications, Visvesvaraya Technology University, Centre for Post graduate studies, Kalaburagi in association with IETE from 6.7.20 to 10.7.20.
7. Professional development training program (PDT) from 20th to 24th January 2020, organized by IIM Jammy (TQIPIII sponsored)
8. FDP on Designing Learner Centric MOOCs by NPTEL-AICTE , July –August 2019.
9. One week FDP on Wireless and Mobile Communication, jointly organized by Electronics & ICT Academies through National Knowledge Network (MeitY), GOI, 3rd to 7th Dec 2018.
10. One week FDP on Artificial Intelligence & Machine Learning, jointly organized by Electronics & ICT Academies through National Knowledge Network (MeitY), GOI, 17th to 21st Dec 2018.
11. One week FDP on Cloud Computing and Internet of Things from 18-22 Dec. 2017,organized by Department of Computer Science & Engineering, Dr. B R Ambedkar National Institute of Teaching, Jalandhar, Punjab, India.
12. AICTE Approved FDP on Foundation Program in ICT for Education from March 8,2018 to April 12, 2018, organized by IIT Bombay & SMVDU Katra.
13. One week FDP on Application of soft computing and machine learning from 3rd – 7th April, 2018, organized by SMVDU, Katra.
14. AICTE approved Four Week FDP on “Use of ICT in Education for Online and Blended Learning”, conducted by IIT Bombay from May 2nd 2016 to July 10, 2016
15. UGC Sponsored General Orientation Course held at University of Jammu, from 4.7.2012-31.07.2012, Organized by Academic Staff College, University of Jammu.

16. UGC Sponsored Refresher Course held at University of Jammu, from 20.12.10-08.01.11, Organized by Academic Staff College, University of Jammu.
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WORKSHOPS / SHORT TERM COURSES

1. Participated in “Authentic Leadership and Excellence” program organized by AICTE Training and Learning (ATAL) Academy and The Central University of Jammu, from 22.11.21 to 26.11.21
2. Participated in Python Workshop organized by Teaching Learning Centre (ICT), IIT Bombay, funded by Pandit Madan Mohan Malaviya National Mission on Teachers & Teaching (PMMNMTT) held at Shri Mata Vaishno Devi University, Kakriyal, Katra J&K, India on 22nd June 2019.
3. One week workshop on “Pedagogy” from 11th to 15th March 2019, Organized by Faculty Development Centre, SMVDU.
4. Pedagogy for Online and Blended Teaching-Learning Process (Re-run of FDP201x offered in 2017) from May 3rd to 30th, 2018 organized by IIT Bombay & SMVDU Katra.
5. 2 Week Refresher course on Research Methodology from March 14-27, 2017, conducted by HRDC-SMVDU, Katra.
6. One day workshop on “Patent Drafting and Filing” in association with Technology Information, Forecasting and assessment council (TIFAC), Department of Science & Technology, Govt. of India. (20th October, 2016)
7. Participated in One Week AICTE recognized Short Term Course on “Optimization using MATLAB through ICT”, organized by NITTTR Chandigarh, held at SMVDU, from 24.10.2016 to 28.10.2016
8. 4th One week AICTE recognized STC on “Mobile Computing through ICT”. 15.2.2016 to 19.2.2016
9. One week Short Term Course workshop titled “Recent Trends in Automobile Engineering” to be conducted at SMVDU in collaboration with NITTTR Chandigarh, from 29-02-2016 to 04-03-2016
10. Two week ISTE STTP on Introduction to Design of Algorithms, Conducted by IIT Kharagpur from 27th April to 30th May 2015, held at SMVDU.
11. Participated in IBM seed training program held at SMVDU from 15th Aug. 2014 to 18th Aug 2014.
12. Participated in One Week AICTE recognized Short Term Course on “Computer Networking using CCNA through ICT”, organized by NITTTR Chandigarh, held at SMVDU, 2013
13. Participated in two week ISTE workshop on Data Base Management Systems, Conducted by IIT

Bombay from 21st May to 31st May 2013

14. *ISTE workshop on Introduction to Research Methodologies, held at SMVDU from 25.6.2012 to 4.7.2012, Organized by IIT Bombay.*
 15. *Two Week ISTE Workshop on Data Base Management Systems, held at SMVDU, Organized by IIT Bombay.*
 16. *Attended “ Red Hat Linux 5.0” Hands on Workshop of one week duration, organized by School of Computer Science & Engg.,SMVDU,2006.*
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PROGRAM / TECHNICAL COMMITTEE MEMBER

1. *Invited as external examiner for evaluating M.Tech final year project , at Engineering College Ajmer [in Online Mode] on 14.4.2022*
2. *Chaired a Session in the “International Conference on Mathematical Sciences and Computational Intelligence” held on 21st-22nd December, 2020 at Shri Mata Vaishno Devi University Katra, J&K, India in collaboration with the Advance Research Educational Society.*
3. *As Program Committee Members of the editorial board constituted for the International Conference Futuristic Trends in Networks & Computing Technologies, held at JayPee University of Information Technology, Wagnaghat from 22nd to 23rd Nov. 2019*
4. *Reviewed the manuscript, entitled "Performance analysis of chaotic maps in differential evolution algorithm for high-dimensional multimodal benchmark functions" for Journal of Experimental & Theoretical Artificial Intelligence. (2019)*
5. *Reviewer for the paper “Dance Movement Learning for Automatic Labanotation Generation based on Motion Captured Data (April 2019) by IEEE Access.*
6. *Chaired a session in International conference on Machine Learning and Computational Intelligence (28-29 sep 2017) organized by Department of Computer Science & Engineering ,SMVDU.*
7. *Reviewed the manuscript, entitled "Can Genetic Algorithms Help Virus Writers Reshape their Creations and Avoid Detection?..As Reviewer for the Journal of Experimental and Theoretical Artificial Intelligence, Taylor and Francis.*
8. *As Program Committee Members of the editorial board constituted for the International Conference on Computing, Communication and Automation, held at Department of Computer Science & Engineering, Galgotia University, Uttar Pradesh from 15th -16th May 2015*
9. *As Program Committee members for the International conference on computing, communication and automation (ICCCA2015), 15-16th May 2015, Department of Computer science and engineering , Galgotia university, U.P, India*
10. *As Program Committee member for the International Symposium on Advanced Computing and*

Communication (ISACC 2015), 14-15 september 2015, Department of Computer science and engineering, Trigunasen school of technology, Assam university, Silchar Assam, India

11. As Program Committee member for the 1st International Conference on Next Generation Computing Technologies, 4-5 september, 2015, Center for Information Technology, University of Petroleum & Energy Studies, Dehradun (INDIA)

12. As Program Committee member for the International conference on computing, communication and automation (ICCCA2016), 29-30th April 2016, School of Computer science and engineering , Galgotia university, U.P, India

BEST PAPER AWARDS

- Best Paper Award: In UGC Sponsored National Conference on Recent Trends in Information Technology, 4th September 2009.

PROFESSIONAL MEMBERSHIPS

- Lifetime Member IETE (Institute of Electronics and Telecommunication Engineers).
- Lifetime Member ISTE (Indian Society for Technical Education).

CONVENER / CO-CONVENER

1. Program coordinator for conducting Hackathon entitled “SMVDU CodeAthon” under the research project RP-124 entitled “Entrepreneurship Programme for students of Jammu Division Colleges” w.e.f 16.11.22 to 19.11.22
2. Co-Convenor for Entrepreneurship Development Program (23.8.22 to 30.8.22) and Business Plan Competition (1.12.22) and Essay writing competition under the research project RP-124, sponsored by Higher Education Department J&K.
3. Co-organizing Secretary for One Day Workshop on “Prevention of Sexual Harassment at Workplace Act 2013” On 31.5.2022 at SMVDU
4. Co-convenor in 7 Days Entrepreneurship Development Program and Business Plan Competition, sponsored by Higher Education Department J&K from 7th March 2022 to 14th March 2022.
5. Coordinator in One day workshop on “Ethical Hacking and Cyber Security” organized by Faculty Development Centre SMVDU, under Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching Scheme (PMMMNTT), 14th January 2022.
6. Co-Coordinator in One day workshop on “ Plagiarism Practices Strategies and Tools” organized by Faculty Development Centre SMVDU, under Pandit Madan Mohan Malaviya National

Mission on Teachers and Teaching Scheme (PMMMNTT), 20th September 2021.

7. Coordinator for the workshop on C and C++ organised by Teaching Learning Centre (ICT) at IIT Bombay, funded by PMMMNTT, MHRD Govt. of India, held at SMVDU on 15th February 2020.
8. Co Convenor for the workshop on Ethical Hacking & Cyber Security , organized at SMVDU (TEQIP III funded) from 25.9.2019 to 26.9.2019.
9. Coordinator for Python Workshop organized by Teaching Learning Centre (ICT) , IIT Bombay , funded by Pandit Madan Mohan Malaviya National Mission on Teachers & Teaching (PMMNTT) held at Shri Mata Vaishno Devi University, Kakriyal, Katra J&K, India on 25th May 2019.
10. Co convenor in National conference on Information Technology and Business Analytics.
11. Remote Center coordinator and workshop coordinator for Two days FDP on “Saptahaant Shikshak Prashikshan” on Introduction to Machine Learning conducted from “16th Dec -17th Dec. 2017, organized by IIT kharagpur with SMVDU as Remote Centre. (Sponsored by TQIP III)
12. Workshop Coordinator for AICTE Approved FDP on Foundation Program in ICT for Education from March 8,2018 to April 12, 2018, organized by IIT Bombay & SMVDU Katra as Remote centre.
13. Workshop Coordinator for Pedagogy for Online and Blended Teaching-Learning Process (Re-run of FDP201x offered in 2017) from May 3rd to 30th, 2018 organized by IIT Bombay & SMVDU Katra as Remote centre.

ADMINISTRATIVE RESPONSIBILITIES

- Member of the Core Committee constituted for preparing course structure and course curriculum of B.Tech. (Mathematics and Computing) Program
- Member of committee constituted by Directorate of Quality Assurance at SMVDU
- Member of the committee constituted for screening/shortlisting of application forms for the position of Assistant Professor
- Member, Quality Circle for Academic Affairs Section SMVDU
- Member, Internal Complaint Committee, SMVDU
- Coordinator, Examination wing.
- Warden Girls Shivalik Hostel, SMVD University, 2013- 2015.
- External Examiner for Practical Exam and Viva, University of Jammu.

- Member of the Committee on Gender Sensitization and Sexual Harassment during my tenure as warden Shivalik Hostel.
- As Paper Setter for setting the paper in the discipline of “Information Technology” for the post of Engineer-IT.
- Member of Anti Ragging Squad
- Member University Transport Committee
- I/c MCA Admission Committee.
- Member of the Doctoral Student Research Committees (DSRC)s from within and outside departments.

INVITED LECTURES/TALKS

1. Resource person in the Higher Education Department, J&K (U.T) sponsored “Entrepreneurship Development Program “ conducted at SMVDU campus during 10th -19th October 2023. Delivered a lecture on “Artificial Intelligence, Big Data Analysis and Business Opportunities” on 17.10.23.
2. Resource person for training programme at Officers training institute, Gole Gujral J&K Bank, delivered a lecture on the topic Internal Complaints (Sexual harassment at workplace – sensitization and awareness ; Understanding of POSH Act 2013) dated 21.10.23
3. Resource person in the Higher Education Department, J&K (U.T) sponsored “Entrepreneurship Development Program “ conducted at SMVDU campus during 23rd August -30th August 2022. Delivered a lecture on “Frugal Innovations” on 30.12.22.
4. Resource person for training programme at Officers training institute, Gole Gujral J&K Bank, delivered a lecture on the topic Internal Complaints (Sexual harassment at workplace – sensitization and awareness ; Understanding of POSH Act 2013) dated 19.5.23
5. Resource person in the Higher Education Department, J&K (U.T) sponsored “Entrepreneurship Development Program “ conducted at SMVDU campus during 7th -14th March 2022. Delivered a lecture on “Frugal Innovations” on 14.3.22.
6. Conducted a training program on (topic) “Applied Productivity Tools in MS Word” for 2 hrs at Govt. Degree College Marh J&K on 25th Aug 2021.
7. Conducted a training program on (topic) “Business Presentations in Powerpoint” for 2 hrs at Govt. Degree College Thannamandi J&K on 16th Aug 2021.
8. Conducted a training program on (topic) “Advanced Microsoft Office” for 1 hr at Govt. Degree College Thannamandi J&K on 12th Aug 2021.
9. Conducted a training program on (topic) “Microsoft word : Basic and Advanced” for 1 hr at Govt. Degree College Thannamandi J&K on 13th Aug 2021.

10. Delivered a Lecture on Fundamentals of C to final year students of G.C.E.T on 13th Sep. 2019 from the perspective of campus placement.
11. Delivered a lecture on “Conditional Formatting & Data Validation for the Executive Training Program ‘Advance Computer Skills for Effective performance’ Executive Development Program towards capacity Building of the employees of SMVDSB: 9th September 2019 to 13th September 2019.
12. Delivered a lecture on “Conditional Formatting & Data Validation for the program ‘Advance Computer Skills for Effective performance’ Executive Development Program towards capacity Building of the employees of SMVDSB: 29th July 2019 to 2nd August 2019.
13. Delivered a lecture on Nature Inspired Algorithms in a Two Week Winter School for faculty from Engineering Streams, 16th Feb 2019 to 1st March 2019.
14. Delivered a lecture on “Practical Session: Integrating MS Excel and MS word for administrative workflow II’ for the program ‘Basic Computer Skills for Effective performance’ Executive Development Program towards capacity Building of the employees of SMVDSB: 4th February 2019 to 8th February 2019.
15. Delivered a guest lecture on “Metaheuristics and its Applicability”, on 13th March 2017 at Model Institute of Engineering and Technology, Jammu.
16. Delivered a lecture on the topic “Virus, Worms, Trojans, Antivirus and Firewalls”, during a 5 day workshop on “Cyber Crime” organized by Sher-I-Kashmir Police Academy, 2008.

CONSULTANCY PROJECTS

S.no.	Title of the Consultancy	Name of the Organization	Total Amount (Rs.)	Duration	Name of Consultant & co-consultants (if any)	Amount of Consultancy Fee in Rs.	Status
1.	Renovation of Party hall 1 st at Jammu Club, Jammu	Jammu Club	2200000/-	4 months	-	55,000/-	Completed
2	Interior Design of Tsokar Retreat at Leh (22 rooms)	Tsokar Retreat	8000000/-	1 year	-	50,000/-	Ongoing

PROJECTS GUIDED (B.TECH)

1. Shivansh Sharma (20BCS081), Shivansh Dwivedi (20BCS079) "Automatically designing CNN Architecture using Genetic Algorithm"
2. Rhythm Jamwal 20bcs064 ,Neeraj Singh 20bcs052, Priyawart Lamba 20bcs061, " Article Evaluator"
3. Abhay Pratap Singh (20BCS001), Aditya Raj Trivedi (20BCS006), Himanshu Bhardwaj (20BCS031) , "Plant Disease Detection"
4. Shivansh Dwivedi (20BCS079), Shivansh Sharma (20BCS081) "Automatically designing CNN Architecture using Genetic Algorithm".
5. Karan Aggarwal (19BCS044), Deep Darshan (19BCS031), "College Space"
6. Ayush Satyam (19BCS022), Prabhav Dogra (19BCS058), Vineet Mahajan (19BCS086), "Koala Database A non relational, in memory and fault tolerant database using client server architecture"
7. PrateekG arg: "Quantitative Steganalysis of JPEG Images:Breaking the F5 Aklgorithm".
8. Shaveta Sharma (2008ECS38): Implementation of Image Compression using DCT and DWT in Matlab.
9. ·KeshavAbrol (2008ECS30), Amulya Sharma (2008ECS59), ShagunPandoh (2008ECS51), "Face Detection and Recognition system with emotion detection".
10. ChoudharyAbhishekArvind (2012ECS08), VinayakNayar (2012ECS39), Abhyuday Singh (2012ECS41) "Context Aware Recommender System".
11. Anmol Sharma (2012ECS24), Naval Kishore (2012ECS54), "Link Analysis using Data Mining Techniques".
12. Prateek Sharma (2011ECS19), Rajesh Kumar Pathak (2011ECS42), Sunny Kumar(2011ECS43) "Global Analytics on Tweets Sentiment".
13. Aaryan Chopra (2013 ECS02), RohitSardalia (2013ECS42), Pranav Sharma (2013ECS31) "Alumin Record".
14. Lalit Aggarwal (2013ECS31), Uttam Kumar (2013ECS52) "The extraction of textual information from images".
15. Abhishek Arvind Choudhary (2012ECS08), VinayakNayar (2012ECS39), Abhyuday Pratap Singh (2012 ECS41) "Music Recommender System".
16. Anuj Sharma (2012 ECS03), Aayush Mittal (2012 ECS07), LaxmiKantRevdikar (2012ECS10), "Multimedia Search Engine Research and Implementation of Text Search in Multimedia".
17. Anuj Sharma (2012 ECS03), Aayush Mittal (2012 ECS07),"Optimal Network Analysis/Traversal using Graph Theory Approach".
18. Ritesh Srivastav (2011ECS49) :A Real time adaptive "Recharge" and "Money Traffic" App.

19. Suryakant Bharti (2010ECS06), "Image Retrieval Engine:Research and Implementation of Context Based Image Retrieval".
 20. Arjun Mahajan (2010ECS35), Ankit Gupta (2010ECS49), MohitGoswami (2010ECS60): "Cloud storage with high security and Multi-factor authentication".
 21. Suryakant Bharti (2010ECS06), NehaGanjoo (2010ECS14), Tajesh Aggarwal (2010ECS15), "GNU Image Manipulation Code Expansion".
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Dr. Sunanda

Assistant Professor

School of CSE

SMVDU