

FACULTY PROFILE



Name: Dr. Abhishek Singhal

Designation: Assistant Professor

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Professional Qualification:

- Ph. D. (Signal Processing)
- M. Tech. (Digital Signal Processing)
- B. E. (Electronics)

Publications (Journals & Conferences):

➤ Journals

- Abhishek Singhal, Devendra Sharma, "Comprehensive Analysis of Gender Classification Accuracy across Varied Geographic Regions through the Application of Deep Learning Algorithms to Speech Signals", Computer Systems Science and Engineering, ISSN:0267-6192, Published, <https://doi.org/10.32604/csse.2023.046730>
- □ Abhishek Singhal, Devendra Kumar Sharma, "Low Resource Language Analysis Using Deep Learning Algorithm for Gender Classification", ACM Transactions on Asian and Low-Resource Language Information Processing, ACM Pub., ISSN: 2375-4699, 2023.
- Abhishek Singhal, Devendra Kumar Sharma, " Precision Value, Error Rate and Accuracy of Human Gender Identification Based on Randomized Voice Signals Datasets", International Journal of Intelligent Engineering and Systems, ISSN: 2185-3118, Vol. 16, Issue 4, 2023, DOI: 10.22266/ijies2023.0831.28.
- Abhishek Singhal, Devendra Kumar Sharma, "Estimation of Accuracy in Human Gender Identification and Recall Values Based on Voice Signals Using Different Classifiers", Journal of Engineering, Vol. 2022, pp. 9291099, 2022, DOI:10.1155/2022/9291099.
- Prashant Mani, K. Vijayan, Pankaj Singh, Abhishek Singhal, Aditya Agarwal, "Implementation of Low Power AMBA-AHB Bus Utilizing the Multi-Coding Technique", Annals of R.S.C.B., vol. 25, no. 3, pp. 2111-2116, 2021, DOI:10.1109/ISS1.2019.8907975.

- Rohit Sharma, Pankaj Singh, Abhishek Singhal, "Two different authentication protocol for RFID credit card security", Journal of Engineering and Applied Sciences, vol. 12, no. 22, pp. 6006–6012, 2017, DOI:10.36478/jeasci.2017.6006.6012.
- Abhishek Singhal, Govind Prakash Verma, Jaya Bhatia, Md Bakhtiyar, "Unmanned Petrol Pumps Using RFID Card and Biometric Impression Technique", International Journal for Research & Development in Technology, vol. 7, no. 4, pp. 242-245, 2017.
- Shekhar, Abhishek Singhal, "Accurate Current Distribution of Dipole Antenna using Pocklington's Integral Equation", International Journal of Innovative Research in Electrical, Electronics, Instrumentation and Control Engineering, vol. 4, no. 6, pp. 243-245, 2016.
- Abhishek Singhal, Prachi Gauba, Sajal Goel, Gaurav Sharma, "SelfGoverning Rotational Vehicle Parking Framework with Gsm and Rfid Technology", International Journal of Engineering Research & Management Technology, vol. 3, no. 2, pp. 84-88, 2016.

➤ **Conferences**

- Anshit Kumar Srivastava, Abhishek Singhal, Rohit Sharma, " Analysis for Autonomous Vehicle Detection Technologies for Recognizing Objects based on Lidar," 7th International Conference on Advances in Computing and Data Sciences (ICACDS-2023), Kolkata, India, 2023
- Abhishek Singhal, Devendra Kumar Sharma, "Estimation of Recall Values and Accuracy of Gender Identification for Different Age Groups Based on Voice Signals," 6th International Conference on Information Systems and Computer Networks (ISCON-2023), Mathura, India, 2023.
- Anshit Kumar Srivastava, Abhishek Singhal, Aarti Sharma, "Analysis of Lidar-Based Autonomous Vehicle Detection Technologies for Recognizing Objects," 6th International Conference on Information Systems and Computer Networks (ISCON-2023), Mathura, India, 2023.
- Abhishek Singhal, Devendra Kumar Sharma, "Estimation of Accuracy and Recall Values for the Different Age Groups Based on Voice Signals using Different Classifiers," 8th International Conference on Signal Processing and Communication (ICSC), Noida, India, pp. 364-369, 2022, DOI: 10.1109/ICSC56524.2022.10009564.
- Abhishek Singhal, Devender Kumar Sharma, "Estimation of Accuracy in Gender Identification Based on Voice Signals Using Different Classifiers", Modern Electronics Devices and Communication Systems, Lecture Notes in Electrical Engineering, vol. 948, Springer, Singapore, 2023. DOI:10.1007/978-981-19-6383-4_33
- Abhishek Singhal, Devendra Kumar Sharma, "Analysis of Classifiers for Gender Identification using Voice Signals," 5th International Conference on Information Systems and Computer Networks (ISCON), pp. 1-4, Mathura, India, 2021, DOI:10.1109/ISCON52037.2021.9702469.
- Madan Sing, Abhishek Singhal, "Modeling of Shape and Size Effects for the Band Gap of Semiconductor Nanoparticles," 2nd International Conference on Micro-Electronics and Telecommunication Engineering (ICMETE), pp. 339-342, Ghaziabad, India, 2018. DOI:10.1109/ICMETE.2018.00080.
- Shekhar, Abhishek Singhal, Rohit Sharma and Pankaj Singh, "Study of Analysis of Multiple Input and Multiple outputs (MIMO) Technology in Wireless Communication," International Conference on Micro-Electronics and

Telecommunication Engineering (ICMETE), pp. 658-662, Ghaziabad, India, 2016. DOI:10.1109/ICMETE.2016.134.

- Shekhar, Taimoor Khan, Abhishek Singhal, Santosh Prasad Singh, "Study and Analysis of Wire Antenna Using Integral Equations: A MATLAB Approach," International Conference on Micro-Electronics and Telecommunication Engineering (ICMETE), pp. 93-98, Ghaziabad, India, 2016. DOI:10.1109/ICMETE.2016.126.
- Abhishek Singhal, Jasmeet Kaur, "Enhance the Capacity of CDMA Network Using Cell Resizing and Interference Cancellation," National Conference on Recent Developments in Control Automation and Power Engineering, Amity University, Noida, India, 2013.
- Harendra Pratap Singh, Abhishek Singhal, "Interference Reduction in Smart Antenna 3G Network Using Adaptive Sectorization," National Conference on Recent Developments in Control Automation and Power Engineering, Amity University, Noida, India, 2013.
- Abhishek Singhal, Pankaj Kumar, Ravi Panwar, Mayank P. Agarwal, "Analysis of Low Pass, High Pass & Band Pass Filter Using Kaiser Window Function," National Conference on Recent Technologies in Electronics, Vidya College of Engineering. Meerut, India, 2011.
- Ravi Panwar, Pankaj Kumar, Abhishek Singhal, Dinesh Kumar, "Reactively Sputtered Amorphous MoN Thin Film Deposition and Characterization," National Conference on Recent Technologies in Electronics, Vidya College of Engineering. Meerut, India, 2011.
- Vivek Narayan Pandey, Abhishek Singhal, Narendra Kumar Verma, "Power Sector Reform and Power Market Design in India," National Conference on Recent Technologies in Electronics, Vidya College of Engineering. Meerut, India, 2011.
- Abhishek Singhal, Pankaj Chaudhary, Vivek Pandey, "A Flexible DSP Core for CDMA Mobile Communication," National Conference on Trends in Signal Processing & Communication, Bhagwant Institute of Technology, Muzaffarnagar, India, 2011.
- Pankaj Chaudhary, Abhishek Singhal, "TPG for boundary scanbased interconnect testing," National Conference on Recent Trends in Electrical & Electronics Engineering, Haryana College of Engineering & Management, Kaithal, India, 2010.
- Abhishek Singhal, Monika Agarwal, "Environment Protection", National Seminar on Natural Resources: Their Protection and Conservation, Sahu Jain (PG) College, Najibabad, India, 30- 31/08/2008.

➤ **Book Chapter**

- Abhishek Singhal, Devendra Kumar Sharma, "Voice signal-based disease diagnosis using IoT and learning algorithms for healthcare," Implementation of Smart Healthcare Systems using AI, IoT, and Blockchain, series of Intelligent

Data-Centric Systems, pp. 59-81, ISBN: 978-0-323-91916-6, 2023.
DOI:10.1016/B978-0-323-91916-6.00005-9

Awards and Achievements

- Co-Inventor of “A Drone System Using Advanced Explosives Detection Function”, 202311031414 A, 09/06/2023
- Co-Inventor of “Smart Hydra Spectacles for Visually Impaired People”, 202211065860A, 25/11/2022
- Co-Inventor of “HELMET”, Design No: 348987-001, 26/05/2022
- Co-Inventor of “A Method of Mitigation of Power Quality Events by Conditioning System in Integration of Three Renewable Energy Sources”, .202141014823 A, 16/04/2021
- Co-Inventor of “A System Based on Neural Network to Refine The Heuristic Data With Image Processing Techniques”, 202141019150 A, 07/05/2021

Workshops/Seminars/FDPs

- Participated in Six days Faculty Development Program on Wearable Devices for IoT and Microwave Infrastructure at SRM Institute of Science and Technology, Delhi – NCR Campus, from 20/12/2022 to 25/12/2022
- Participated in Two Week online Faculty Development Program/ Short-Term Training Program on Advanced Optimization Techniques and hands-on with MATLAB/SCILAB at Electronics & ICT Academies at MNIT Jaipur, NIT Patna & IIITDM Jabalpur, from 08/08/2022 to 19/08/2022
- Participated in One Week Faculty Development Program on Advanced Security Analytics and Machine Learning at SRM Institute of Science and Technology, Delhi – NCR Campus, Ghaziabad, from 18/04/2022 to 23/04/2022
- Participated in One Day Seminar on Research Methodology at SRM Institute of Science & Technology taken by Dr D. P. Kothari (Ex- Director, IIT Delhi), 01/03/2019
- Completed 16 weeks Faculty Development Program on Switching Circuits and Logic Design Conducted by NPTEL- AICTE, July – October, 2018.
- Participated in Guest Lecture on Application of Microwave in Material and Mineral Technology at SRM University, 29/05/2016
- Participated in One Day Faculty Development Program on Energy Audit & Energy Management at Northern India Textile Research Association, Ghaziabad, 23/04/2015
- Participated in One Day Faculty Development Program on Enabler the Enabling – Drive way to Successes.at Vidya College of Engineering, Meerut, 20/07/2012
- Participated in Fifteen days Staff development Program on Technologies in VLSI & Embedded System at Vidya College of Engineering, Meerut, from 25/01/2010 to 07/02/2010.

- Participated in One Day Workshop on Emerging Trends in Microwave Integrated Circuits at Bhagwant Institute of Technologies, Muzaffarnagar, 13/03/2010

Work Experience: 22 Years

Professional Memberships:

- Professional member of Association of Computing Machinery (ACM) – 7798165
- ISTE Life Time Member – LM138653
- International Association of Engineers (IAENG) – 270565
- Computer Science Teacher Association (CSTA) – 10947028
- Institute of Research Engineers and Doctors (theIRED) –AM10100055777