

Faculty Profile

Name	: Dr. Priyanka Nandal
Designation	: Associate Professor
Qualifications	: Ph.D. (IIT Delhi), M.Tech., B.E.
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Area of Interest/Specialization:	Machine learning, deep learning, data science
Experience	: 21 years



Key Publications

Research Papers Published in **SCI/SCIE Indexed International Journals**

1. **Nandal, P.**, Pahal, S., Khanna, A., & Pinheiro, P. R. (2024). Super-resolution of medical images using real ESRGAN. *IEEE Access*.
2. Vrince Vimal, R. Muruganatham, R. Prabha, A.N. Arularasan, **P. Nandal**, K. Chanthirasekaran, and Gopi Reddy Ranabothu, Enhanced Software Defined Network Security with IOT for Strengthen the Encryption of Information Access Control, *Computational Intelligence and Neuroscience*, 4437507, (2022).
3. **P. Nandal** and R. P. Sharma, Numerical simulation on GPUs with CUDA to study nonlinear dynamics of whistler wave and its turbulent spectrum in radiation belts, *Computer Physics Communications*, 254, 107214, (2020).
4. R. P. Sharma, **P. Nandal**, N. Yadav, and Swati Sharma, Nonlinear evolution of oblique whistler waves in radiation belts, *Astrophysics and Space Science*, 362, 32, (2017).
5. R. P. Sharma, **P. Nandal**, N. Yadav, and R. Uma, Nonlinear effects associated with oblique whistler waves in space plasmas, *Physics of Plasmas*, 23, 102905, (2016).
6. **P. Nandal**, Swati Sharma, N. Yadav, and R. P. Sharma, Formation of Coherent Structures and Impact on Turbulence Scaling in Solar-Wind Plasma, *Solar Physics*, 291, 3765-3775 (2016).
7. **P. Nandal**, N. Yadav, R. P. Sharma, and M. L. Goldstein, Potential role of kinetic Alfvén waves and whistler waves in solar wind plasmas, *Astrophysics and Space Science*, 361 (7), 1-6, (2016), doi: 10.1007/s10509-016-2824-y
8. **P. Nandal**, N. Yadav and R. P. Sharma, Localization and implication of oblique whistler wave in the magnetopause region, *Physics of Plasmas*, 23, 042310, (2016), doi: <http://dx.doi.org/10.1063/1.4947210>.

Research Papers Published in **Peer reviewed International Journals** (other than that mentioned above) i.e. UGC CARE list of journals as **First/ Second/Corresponding author**

1. **Nandal, P.**, & Malik, S. (2024). Leveraging AdaBoost and CatBoost to Classify the Likelihood of Brain Stroke. *Journal of Scientific Research*, 16(3), 637-646. **[UGC care]**
2. **P. Nandal**, Security system using face recognition, *International Journal for Research in Engineering Application & Management (IJREAM)* Volume 5, Issue 08, November, 2019, ISSN [ONLINE]: 2454-9150. **[UGC Refereed Journal]**
3. **Priyanka Nandal**, Watermarking for digital Images, *International Journal for Science and Advance Research In Technology (IJSART)*, Volume 3, Issue 11, November, 2017, ISSN [ONLINE]: 2395-1052. **[UGC Refereed Journal]**
4. **Priyanka Nandal**, A Robust Approach to Analyze Sentiments for Trending Hashtags, *International Journal of Advance Engineering and Research Development (IJAERD)*, Volume 4, Issue 10, pp 530-534, October, 2017, ISSN [ONLINE]: 2348-4470 **[UGC Refereed Journal]**
5. **Priyanka Nandal**, Implementation using R to Forecast GDP, *International Journal for Science and Advance Research In Technology (IJSART)*, Volume 3, Issue 9, pp 442-445, September, 2017, ISSN [ONLINE]: 2395-1052. **[UGC Refereed Journal]**

Research Papers in Conferences

1. M Devi, **P. Nandal**, H. Sehrawat, "Developing WSN-Oriented Intrusion Detection Systems Using Machine Learning", In 8th *International Conference on Innovative Computing and Communication (ICICC-2025)* held on 14-15 Feb 2025, at Shaheed Sukhdev College of Business Studies, University of Delhi.
2. Babli, **P. Nandal**, H. Sehrawat, "A Survey on Energy-Efficient and Load Balancing Routing Protocols for IoT based WSNs", In 8th *International Conference on Innovative Computing and Communication (ICICC-2025)* held on 14-15 Feb 2025, at Shaheed Sukhdev College of Business Studies, University of Delhi.
3. V. Rohilla, **P. Nandal**, S. Pahal, "Deep LocAWS: A Deep Multilayer Perceptron Neural Network Collaborative Filtering for Location-Aware Web Service Recommendation", In 8th *International Conference on Innovative Computing and Communication (ICICC-2025)* held on 14-15 Feb 2025, at Shaheed Sukhdev College of Business Studies, University of Delhi.
4. Devi, M., Nandal, P., & Sehrawat, H. (2024). Machine Learning Based IDS for WSNs: A Review. In *International Conference on Progressive Innovations in Intelligent Systems and Data Science (ICPIIDS-2024)* held on 27-28 Dec 2024, at Pataya, Thailand.
5. Nidhi, S. Pahal, and **P. Nandal** (2024). Realtime Driver drowsiness detection using YOLOv5 and computer vision techniques. In 13th TIPSCON 2024: An International Conference on Nurturing growth through Indigenous Development: A key to Global Competence held on 10 Aug 2024 at India International Centre, new Delhi.
6. **P. Nandal**, and S. Pahal, (2024). Upscaling images with ESRGAN with perceptual loss. In 7th *International Conference on Innovative Computing and Communication (ICICC-2024)* held on 16-17 Feb 2024, at Shaheed Sukhdev College of Business Studies, University of Delhi.
7. S. Pahal, and **P. Nandal** (2024). Handover Challenges in Wireless Communications and Their Solutions. Available at SSRN 4749805.
8. Sunesh Malik, **P. Nandal**, Mamta, Aakansha, Revolutionizing Attendance Management: Deep Learning and HOG-Based Smart System for Educational Institutions, In International Conference on Computational

Intelligence and Mathematical Applications (ICCIMA 2023) held on 21-22 Dec 2023, at Panipat Institute of Engineering and Technology (PIET), Samalkha, Haryana, India.

9. **P. Nandal**, "A Blockchain Based Management System for Product Tracing and Tracking in the Supply Chain", In 3rd *International Conference on Information Technology (InCITE 2023)*, held on 2-3rd March, 2023, at Amity University, UP.
10. M Devi, **P. Nandal**, H. Sehrawat, "DDOS attack in WSN using Machine Learning", In 6th *International Conference on Innovative Computing and Communication (ICICC-2023)* held on 17-18 Feb 2023, at Shaheed Sukhdev College of Business Studies, University of Delhi.
11. **P. Nandal**, "A Hybrid Model for Review Analysis Using Deep Learning", In *Proceedings of International Conference on Communication and Computational Technologies (ICCCT 2022)*, Algorithms for Intelligent Systems, 2023, pp. 381-389, Springer, Singapore. https://doi.org/10.1007/978-981-19-3951-8_29.
12. **P. Nandal**, Y. Kadian, S. Upadhyay and B. P. Mudgal, "Pronunciation Accuracy Calculator using Machine Learning," 2021 5th *International Conference on Computing Methodologies and Communication (ICCMC)*, 2021, pp. 1128-1133, doi: 10.1109/ICCMC51019.2021.9418381.
13. **P. Nandal**, A. Satyawali, D. Sachdeva and A. S. Tomar, "Graph Coloring based Scheduling Algorithm to automatically generate College Course Timetable," 2021 11th *International Conference on Cloud Computing, Data Science & Engineering (Confluence)*, 2021, pp. 210-214, doi: 10.1109/Confluence51648.2021.9377151.
14. **P. Nandal**, "Deep Learning in diverse computing and Network applications student admission predictor using deep learning" in *International Conference on Innovative Computing and Communication (ICICC-2020)* held on 21-23 Feb 2020, at Shaheed Sukhdev College of Business Studies, University of Delhi.
15. **P. Nandal**, "Smell-O-Vision Device" in *International conference on Computational Methods and Data Engineering (ICMDE 2020)*, Springer, held on 30-31 Jan 2020, at SRM University Delhi-NCR.
16. **P. Nandal**, "Speech Separation using Deep Learning" in *International Conference on Sustainable Communication Networks and Application (ICSCN 2019)*, Springer, Cham, pp. 319-326, held on 30-31 Jul 2019, at Surya Engineering College, Erode, TN, India.
17. **Priyanka** and S. Goel, "A compression algorithm for DNA that uses ASCII values", *IEEE International Advance Computing Conference (IACC2014)*, pp.739-743, held on 21-22 Feb 2014, at Gurgaon, India.

Presentations in Seminars

1. **P. Nandal**, "GAN based motion Imitation" in *Modern Management based on big Data (MMBD2021)*, held on 8-11 Dec 2021, at Huaqiao University, Quanzhou, China.
2. **P. Nandal**, "Role Of 2-D KAW and Whistler Wave in Solar Wind Plasmas" in *National symposium on Plasma Science and Technology in association with Plasma Science Society of India (PSSI 2015)*, held on 1-4 Dec 2015, at Saha Institute of Nuclear Physics, Kolkata, India.

Books Authored

1. **P. Nandal**, (2021). Optimizing Web Search Results for Image: K-means Clustering Algorithm. *GRIN Verlag*. ISBN 9783346348593.
2. **P. Nandal**, (2017). Digital watermarking to protect Images. In *Lambert Academic Publishing*, ISBN 978-3-659-75147-9.
3. **P. Nandal**, (2017). Malware Detection. In *Anchor Academic Publishing*, ISBN: 9783960672081.

Book Chapters in International Books

1. **P. Nandal**, (2021). Motion Imitation for monocular videos. In *Examining the Impact of Deep Learning and IoT on Multi-Industry Applications* (pp. 118-135). IGI Global.

Awards and Recognitions

1. Received Letter of Appreciation from SMES for excellent services in the institute on 16th May ' 2016.
2. Summer Faculty Research Fellowship from IIT Delhi from 16/05/2013 to 15/07/2013.

Patent/Copyright

1. "IOT enabled obstruction evasion robots for enhancing the security of the system", Patent No. 202111013252
2. "New computing paradigm for communications through edge computing", Patent No. 202211031844
3. "Artificial intelligence based multi utility smart remote", Patent no. 380819-001
4. "Automatic contactless fluid dispenser", Patent no. 371887-001