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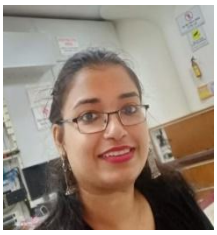

ACADEMIC DETAILS

Examination	University	Institute	Year	GPA / Marks (%)
Doctor of Philosophy *(Communication)*	IIT Delhi	IIT Delhi	2018 (Dec)- continuing	8.00
Master of Technology *(Digital Communication)*	GGSIPU	NSUT East Campus (Formerly AIT), Delhi	2016 - 2018	9.29
Bachelor of Technology *(Electronics & Communication Engineering)*	UPTU	J.P Institute of Engineering & Technology	2011- 2015	76.92

FIELD OF INTEREST

- Wireless Communication, Massive MIMO, OTFS, 5G, ISAC.

TECHNICAL SKILLS

- Languages: C, Python, Linux.
- Tools: MATLAB, NS2, Latex.

WORK EXPERIENCE

- **Project Assistant, Centre for Applied Research in Electronics (CARE), IIT Delhi, July 2018 – December 2018**
  - Responsibility: Coding, Development &Testing.
- **Teaching Assistant (2018 - 2021):** Signal and System (ELL205), Digital Communication (ELL411), Communication Engineering (ELL311)

MAJOR PROJECTS

- **Development of optimum receiver for underwater acoustic communication tuned to INDIAN oceans**.
  Supervisor: Prof. Monika Agarwal, IIT Delhi, January'19 – April'19
  - I worked on implementing optimized underwater acoustic transmitter and receiver algorithms in C.
- **Adaptive and QoS-aware Medium Access Control Protocol for IOT-enabled Mobile Ad-hoc Network**. (Postgraduate- Minor Project)
- **Adaptive QoS Aware MAC Protocol for Heterogeneous IoT-Enabled MANET** (Postgraduate- Major Project)
- **Design and Simulation of Microstrip Patch Array Antenna for Wireless Application.** (Graduate Project)

- In this project we have simulated and designed a microstrip Patch Array antenna (2*2 & 4*4) for 2.5G application.

PUBLICATIONS

Published Articles.

- P. Dube, A. Jain, A. Bhardwaj “Layer-wise Security Attacks in IOT Technology” IEEE conference, INDIAcom- 2018, ISBN 978-93-80544-28-1.
- P. Dube, A. Jain, V. Gupta “Messaging Protocol Used in IOT Technology” IEEE Conference, INDIAcom- 2018, ISBN 978-93-80544-28-1.
- V. Gupta, A. Jain, P. Dube “Effects of Some Issues on Localization Accuracy in Underwater Acoustic Sensor Networks” IEEE Conference, INDIAcom- 2018, ISBN 978-93- 80544-28-1.
- A. Bhardwaj, R. Bhatia, P. Dube “Evaluation of 16 QAM OFDM Passive Optical Network” IJASRET, Vol 2, Issue 2. 2017.
- P. Lohan, P. Dube, and M. Agarwal, "A Novel 3D Topology Design for Underwater Sensor Networks," *Global Oceans 2020: Singapore – U.S. Gulf Coast*, Biloxi, MS, USA, 2020, pp. 1-5
- P. Dube, B. C. Pandey and M. Agrawal, "Overview and Performance Assessment of Different Multicarrier Waveforms for Wideband Underwater Acoustic Communication," *OCEANS 2024 - Singapore*, Singapore, Singapore, 2024, pp. 1-8
- P. Dube, B. C. Pandey, and M. Agarwal, "PAPR Reduction of Delay Doppler Modulation using Polyphase Sequences"-Presented at IEEE FNWF’24 Conference, Dubai
- ”- Submitted in NCC 2025
- P. Dube, B. C. Pandey, and M. Agrawal “A novel AI/ML based HARQ Feedback Predictor for Wireless Communication System”- Submitted in ICMLCN conference
- P. Dube, B. C. Pandey, and M. Agrawal “OTSM-Index Modulation: A Novel Approach for Underwater Acoustic Systems”- Submitted OCEANS Breast 2025
- P. Dube, B. C. Pandey, and M. Agrawal "OTFS-IM with Spread Spectrum for Robust Underwater Acoustic Channels"- Submitted OCEANS Breast 2025
- P. Dube, B. C. Pandey, and M. Agrawal “Efficient Symbol Precoding for PAPR Reduction in OTFS Systems”- Under Review Springer Wireless Personal Communication

Patent

M. Agrawal,P. Dube, and B. C. Pandey, “A Novel AI/ML Approach to Reduce HARQ Feedback Overhead in Wireless Systems- Submitted

ACHIEVEMENTS

- 2nd Position Holder in MTech 2016-2018 (GGSIPU -Digital Communication).
- Selected for Ph.D. Position in Four IITs (IIT-Kanpur, IIT- Hyderabad, IIT-Ropar, IIT-Delhi) (2018 December).

COURSES DONE

- Detection and Estimation Theory, Signal Theory, Linear Algebra, Advance Digital Signal Processing, Wireless Communication & Massive MIMO.

Co-Curricular Activities

- Chairperson of IEEE Ocean Engineering Society IITD Student Branch Chapter.
- Chairperson and Sectary of IEEE IIT DELHI WIE Affinity Group.
- Event Coordinator and Webmaster of IEEE IIT Delhi Student Branch Chapters

- Organize various Seminar, Workshop, and Conference talks in collaboration with the Indian Navy, IIT Delhi, and IEEE Student Branch Chapter
- Trained Classical Dancer and Singer

STRENGTHS

- Positive Attitude, Hardworking, Social Interaction, Project Management.

INTEREST AND HOBBIES

- Social Work and Writing, Cultural Program

REFERENCES

- **Dr. Monika Aggarwal**
  Professor, IIT Delhi
  CARE IIT Delhi, Hauz Khas Delhi – 16
  Phone No: 9810032545
  Email Id: maggarwal@care.iitd.ernet.in
- **Dr. Aarti Jain**
  Professor, NSUT Delhi
  NSUT East Campus (AIACTR) Delhi,
  Phone No: 9871588459
  Email Id: aarti.jain@nsut.ac.in
- **Dr. Brijesh Pandey**
  System Architect & Algorithm Developer
  R &D, NOKIA, Bengaluru-560077
  Phone No: 9968435427
  Email Id: brijesh.pandey@nokia.com
- **Dr. Sandeep Joshi**
  Assistant Professor, BITS Pilani
  Electrical and Electronics Engineering Department
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