Vibha Aggarwal

PERSONAL DETAILS

DOB: November 06, 1980
Citizenship: Indian
Marital status: Married

EDUCATIONAL AND OTHER QUALIFICATIONS

- Ph D (2013) in Electronics and Communication Engineering from Punjabi University, Patiala
- Master of Engineering (2005) in Electronics and Communication Engineering from Thapar Institute of Engineering & Technology, Patiala (Punjab)
- Bachelor of Engineering (2003) in Electronics and Communication Engineering from G.L.A.I.T.M, Mathura. (Dr. B.R. Ambedkar University Agra)
- Post Graduation Diploma (2009) in Information Technology from Symbiosis Center for Distance Learning (SCDL), Pune
- Diploma (1999) in Electronics and Telecommunication Engineering from Pt. J.R. Govt. Polytechnic, Hoshiarpur. (P.S.B of Tech. Ed. & Ind. Training)

EMPLOYMENT HISTORY:

- Associate Professor (Aug 2022 – till date): in Computer Science at University College, Barnala, Punjab, India.
- Assistant Professor (July 2022 – Aug 2022): in Computer Science at University College, Barnala, Punjab, India.
- Assistant Professor (Aug 2008 - July 2022): in Electronics and Communication Department at COEM, Punjabi University Neighborhood Campus, Rampura Phul, Punjab, India
- Lecturer (Jan 2006 - Aug 2008): in Electronics and Communication Department at RIMT-IET, Mandi Gobindgarh, Punjab, India
- Lecturer (July 2005 - Jan 2006): in Electronics and Communication Department at IET, Bhaddal, Punjab, India
- One year (1999 – 2000) Apprentice Training in Punjab State Electricity Board, Patiala.

SHORT TERM COURSES AND WORKSHOPS: 16

1. **DSP and its Application,** 4th July 2006 to 7th July 2006.
2. **Advanced Signal Processing Techniques in Wireless Communication,** 4th December 2006 to 23rd December 2006.
3. **Advanced Communication Systems and Networks-ACSN'08,** 7th July 2008 to 18th July 2008.
4. **High Performance Computing: issues And Applications**, 29th June 2009 to 10th July 2009
5. **Orientation Programme,** 3rd January 2011 to 31st January 2011.
6. **Refresher Course in Information Technology** 23rd February 2012 to 14th March 2012.
7. **Professional Courses ID: Electronic & Communication Engineering,** 4th May 2015 to 23rd May 2015.
8. **Conservation Agriculture Gateway for Productive and Sustainable Cropping system**, 7th November 2016 to 21th November 2016.

9. **Population of Remote Sensing Based Map & Geo Special Information,** 11th August 2017.
10. **Design Challenges in Low Power VLSI Design,** 4th December 2017 to 16th December 2017.
11. **Online Safety Awareness,** 8th October 2018 to 12th October 2018.
12. **Multivariate data Analysis** 11th December 2019 to 24th December 2019.
13. **Remote Sensing & GIS Technology and Applications** 13th June 2020 to 1st July 2020.
14. **Prespectives on AI, ML, Data Science & IOT,** 17th May 2021 to 5th June 2021.
15. **Future Advancement in the field of Telecommunication and Embedded System**, 24th August 2021 to 30th August 2021.
16. **IoT and its Applications,** 5th December 2022 to 9th December 2022.

MEMBERSHIPS IN SCIENTIFIC SOCIETIES: 02

1. Life Time Membership of The Indian Society for Technical Education, Membership Number (LM 80819)

2. Life Time Membership of Punjab Academy of Sciences, Membership Number (L-1099)

GOOGLE SCHOLAR CITATIONS: Total citations = 144; h-index = 7; i10 index = 6

PUBLICATIONS: 48

- Scientific Journals: 22

1. **Performance Analysis of Non-Linear Transformational ECG Compression Method.**
2. **ECG Compression using Wavelet Packet, Cosine Packet and Wave Atom Transforms.**
3. **Quality Controlled ECG Compression using Alpert Multiwavelet Transform.**
4. **ECG Signal Compression using Normalization and Thresholding.**
5. **Quality controlled ECG compression using essentially non-oscillatory point-value decomposition (ENOPV) technique.**
6. **ECG compression using Slantlet and lifting wavelet transform with and without normalization.**
7. **Quality Controlled ECG Signal Compression using Genetic Algorithm.**
8. **ECG Image Compression: Essentially Non-Oscillatory Interpolation Technique and Lifting Schemes.**
9. **ECG Signal Compression using Morphological Haar Wavelet Transform.**
10. **Ant Systems of Optimization: Introduction and Review of Applications.**
11. **Goal Programming for Decision Making: Review of Applications.**
12. **Enactment Evaluation of Discrete Sine Transform for Blood Pressure Signal Compression in Salt Sensitive Dahl Rat.**
13. **Quality Controlled Blood Pressure Signal Compression in Salt Sensitive Dahl Rat Using Fractional Fourier Transform.**
14. **Comparative Performance of Non-Linear Transforms for Magnetic Resonance Angiography Image Compression.**
15. **Comparative Performance of Different Linear Transforms for Magnetic Resonance Angiography Image Compression.**
16. **Comparative performance of two-dimensional transforms for Magnetic Resonance Angiography image compression.**
17. **Comparative Studies of Discrete Cosine Transform and Lifting Wavelet Transform Techniques for Compression of Blood Pressure Signal in salt sensitive Dahl Rat.**

18. **Study of Image Watermarking using 2D Discrete Wavelet Transform, Lifting Wavelet Transform and Discrete Cosine Transform and Watermarked Image Compression using SPHIT Algorithm.**
19. **Simulation Based Comparative Analysis of Proactive Routing Protocols: OLSR, DSDV and WRP.**
20. **Quality Controlled EMG Signal Compression using Linear and Non-Linear Transforms.**
21. **Analysis of Compressed Foetal Phono-Cardio-Graphy (PCG) Signals with Discrete Cosine Transform and Discrete Wavelet Transform.**
22. **Seismocardiogram Signal Compression using DCT and DWT.**

Book Chapter: 06

1. **Simulation based Comparative Analysis of Proactive Routing Protocol: OLSR and DSDV.**
2. **Upgraded Carry Select Adder: Design and Analysis.**
3. **MANET Routing Optimization using Nanotechnology.**
4. **Utility of Nanotechnology in Various Disciplines.**
5. **Artificial Intelligence and Nanotechnology: A Super Convergence**
6. **Analysis of Domestic Cars in India for Middle-Income Group Using TOPSIS**

- International conference proceedings: 08
- National conference proceedings: 12

(Vibha Aggarwal)
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