Dr. Deepak Sharma

Assistant Professor(SG)

Education: B.E.(Electronics and Tele-Communication), M.Tech. (Microwave Engineering), Ph.D.

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Areas of Interest: Image Processing, Antenna Designing and Digital Signal Processing.

Brief Profile:

He received B.E. (Electronics and Tele-Communication) and M. Tech. (Microwave Engineering) Degree from Indira Gandhi Govt. Engg. College, Sagar and Madhav Institute of Technology and Science (MITS), Gwalior in 2003 and 2006, respectively. Before joining Jaypee University of Engineering and Technolology (JUET), Guna, he works as a lecturer in Madhav Institute of Technology and Science (MITS), from 2006 to 2007. In 2007 July he joined JUET as a lecturer and now he is working as assistant professor (G-II) in department of Electronics and Communication Engineering. His research interests include Image Processing, Antenna Designing Digital Signal Processing and Integral Transforms. He has published more than 10 technical papers in international /national journals and conferences of repute.

Research Guidance:

(a) PhD Ongoing: 2

Project Supervision (UG AND PG Level):

- M. Tech Students Project Guided: 4
- B. Tech Students Project Guided : More than 35

PATENTS

• Interactive Learning Based Human Behaviour Mimic System, (Application Number: 379447-001, Cbr. Date: 16/02/2023, Cbr. No. 202147, Design Accepted and Published, Journal No is 20/2023 and Journal Date is 19/05/2023)
• AI Based Glasses for Determining Retina Strain, (Application Number: 368596-001, Date of applied: July 30, 2022, Cbr. No. 204385, Design Accepted and Published, Journal No is 16/2023 and Journal Date is 21/04/2023)
• Object Motion Detection-Based Public Lighting fixture (Application Number: 368597-001, Cbr Date: 30/07/2022, Cbr No. 204385, Design Accepted and Published, Journal No is 16/2023 and Journal Date is 21/04/2023)
• Biometric Sensors on Steering Wheel For an Electric Vehicle (Application Number: 371000-001, Cbr No. 206110, Date of applied: September 17, 2022, Design Accepted and Published, Journal No is 02/2023 and Journal Date is 13/01/2023)
• Solar Powered Secure Intelligent Automobile Vehicle, Application Number: 379448-001, CBR Number: 202148, Cbr. Date: February 16, 2023, Design Accepted and Published, Journal No is 18/2023 and Journal Date is 05/05/2023)
• Solar Powered Human Detection System, (Application Number: 370737-001, CBR Number: 205899, Cbr. Date: 12/09/2022, Design Accepted and Published, Journal No is 10/2024 and Journal Date is 08/03/2024)

• AI Based Air Traffic Control System (Application Number: 379398-001, Cbr. Date: February 16, 2023, Cbr. No. 202120, Design Accepted and Published, Journal No is 43/2023 and Journal Date is 27/10/2023)
• IoT Based Information Modeling for Cyber Physical Production System Based on Digital Twin and Automation ML, (Application Number: 202421000551, Date of Filing: March 1, 2023, Date of Published: 02/02/2024)

Publication@JUET

Publication details google profile link

JOURNALS:

1. Deepak Sharma*, Ankit Aggrawal, Ankit Gupta, Harshita Rai and Neha Singh, "Robust Watermarking Scheme Based on Discrete Wavelet Transform and Visual Hided Scheme", International Journal of Advancements in Technology, DOI: 10.4172/0976-4860.1000161, vol. 7, issue 3,

2. Deepak Sharma, Rajiv Saxena and Narendra Singh, "Dual Domain Robust Watermarking Scheme Using Random DFRFT and Least Significant Bit Technique", Multimedia Tools and Applications (2016). doi:10.1007/s11042-016-4095-6, Springer publisher. (SCI)

3. Deepak Sharma, Rajiv Saxena and Narendra Singh, "Better Performance for Compression Scheme using Multiple Parameter Discrete Fractional Fourier Transform," International Journal of Advanced Information Science and Technology, vol.50, no.50, pp. 20-25, June 2016. (SCOPUS)

4. Ankita Shrivastava, Nidhi Singh, Deepak Sharma, Aakash Thakur and Nitesh Garodia, "Secured OFDM System Using Chaotic Interleaving For Wireless Standards", Journal of Environmental Science, Computer Science and Engineering & Technology, Vol.5. No.2, pp. 216-226. March 2016- May 2016.

5. Deepak Sharma, Udita Arora, Prakram Suri, Rishabh Tripathi, "BETTER SCHEME FOR MULTIMEDIA COMPRESSION USING RANDOM DISCRETE FRACTIONAL FOURIER TRANSFORM FOR JPEG 2000 STANDARD" i-manager's Journal on Image Processing, Vol. 2 l No. 1 l January - March 2015

6. Deepak Sharma, Rajiv Saxena and Narendra Singh "Robust Watermarking against Geometric Attacks using Multiple Parameter Discrete Fractional Fourier Transform and Least Significant Bit Technique" International Journal of Security and Its Applications, Vol.8, No.5 (2014), pp.439-456, http://dx.doi.org/10.14257/ijsia.2014.8.5.38

7. Deepak Sharma, Rajiv Saxena and Narendra Singh, "Hybrid Encryption-Compression Scheme Based on Multiple Parameter Discrete Fractional Fourier Transform With Eigen Vector Decomposition Algorithm" International Journal of Computer Network and Information Security, vol. 6, no.10, pp. 1-12, 2014, DOI:10.5815/IJCNIS.2014.10.01.

8. Deepak Sharma, Rajiv Saxena and Narendra Singh, "Image Compression based on Multiple Parameter Discrete Fractional Fourier Transform for Satellite and Medical Images" International Journal of Signal Processing, Image Processing and Pattern Recognition, vol. 7, no.3, pp. 453-474, 2014.

9.Deepak Sharma, Rajiv Saxena, "A Novel Image Encryption Scheme based on Multiple Parameter Discrete Fractional Fourier Transform", International Journal of Computer Applications (0975-8887), vol. 93, no. 2 pp. 9-16, May 2014.

10. Ashutosh, Deepak Sharma, "Image Encryption Using Discrete Fourier Transform and Fractional Fourier Transform", International Journal of Engineering and Advanced Technology (IJEAT), ISSN: 2249 - 8958, Volume-2, Issue-4, 886-890, April 2013

11. Deepak Sharma, Rajiv Saxena, Ashutosh, "Robust Image Encryption Using Discrete Fractional Fourier Transform with Eigen Vector Decomposition Algorithm", Advances in Microelectronic Engineering (AIME), vol. 1, Issue-4, 77-82, 2013.

CONFERENCE:

1. Deepak Sharma, Subodh Kumar Singhal, Ram Mehar Singh Dhariwal, Design of 1.3 GHz Microstrip Highpass Filter Using Optimum Distributed Short Circuited Stubs, Computational Intelligence, Communication Systems and Networks, pp. 264-267, 2009. CICSYN'09. IEEE Publisher

2. Deepak Sharma, Ravi Kumar, Design and Analysis of Five Element Microstrip Log-Periodic Antenna, Applications of Electromagnetism and Student Innovation Competition Awards (AEM2C), 2010 ISBN 978-1-4244-6416-6 pp. 210-214 IEEE Publisher

3. Deepak Sharma, Subodh Kumar Singhal, Ram Mehar Singh Dhariwal, Design of 1.5 GHz Quasilumped Microstrip Highpass Filter Computational Intelligence, Communication Systems and Networks, 2009. CICSYN'09. 268-270, 2009. CICSYN'09. IEEE Publisher

4. Deepak Sharma, P. K. Singhal and Dhyanendra Parashar, "New printed log-periodic dipole array" The Antennas and Propagation Symposium (APSYM 2006) pp. 225-228, Published by CREMA

5. Ashutosh, Deepak Sharma, "Robust Technique for Image Encryption and Decryption Using Discrete Fractional Fourier Transform with Random Phase Masking", International Conference on Computational Intelligence: Modeling Techniques and Applications (CIMTA 2013), Elsevier Procedia Technology, doi: 10.1016/j.protcy.2013.12.413, pp. 707-714, Published by Elsevier Ltd., October 2013.

6. Deepak Sharma, Ashutosh, "Effect of Electronics Devices on Environment", National Conference on Environmental Sustainability and Society: The Growing Paradigm Shift (ESS 2013) 30-31st March 2013, Jaypee University of Engineering and Technology, Guna, INDIA

7.Ayush Srivastav Anvesha Goyal Anjali Srivastava and Deepak Sharma, "Hybrid Doubly Watermarking Scheme Using Dirty Paper Codes and Discrete Cosine Transform with Side Information" national advancement on advancement in science and technology for sustainable future, May 13-15, 2015

PUBLISHED BOOK:

1. Deepak Sharma “DESIGNING OF LOG PERIODIC ANTENNAS: A COMPUTATIONAL APPROACH” ISBN 978-3659155567, Lambert Academic Publishing, Saarbrücken, Germany, 2012.

2. Deepak Sharma, Narendra Singh and D. K. Verma, “HANDBOOK ON EMBEDDED SYSTEMS AND IOT”, ISBN No. 978-93-6132-911-1, Scientific International Publishing House, 2024.

3. D. Khalandar Basha, Deepak Sharma and P. Poonkuzhali, “MODERN VLSI: SYSTEM ON CHIP”, ISBN No. 978-93-6132-278-5, Scientific International Publishing House, 2024.

BOOK CHAPTERS:

1. Ms. Megha Motta, P.S. Banerjee and Deepak Sharma, “Healthcare Services in the Metaverse Game Theory, AI, IoT, and Blockchain” E-ISBN:9781003449256, Publisher CRC Press, May 2024.[https://doi.org/10.1201/9781003449256]

2. Hare Krishna, Prashant Kumar Singh, Deepak Sharma & Anjini K. Tiwary “Dual-Band Stop Filter with Controllable Stop-Bands Based on Defect in Shunt Radial Stub” Lecture Notes in Networks and Systems, vol. 426, pp. 165-175, eBook ISBN 978-981-19-0745-6, April 2022 Print ISSN 2367-3370, Springer publisher.[https://link.springer.com/chapter/10.1007/978-981-19-0745-6_18]

3. Ms. Megha Motta, P.S. Banerjee and Deepak Sharma, “Futuristic Approach for Intelligent Cognitive Radio Using Different Machine Learning Algorithms” Lecture Notes in Networks and Systems, vol. 521, pp. 464–476, November 2022, Electronic ISSN 2367-3389, Print ISSN 2367-3370, Springer publisher.[https://link.springer.com/chapter/10.1007/978-3-031-13150-9_37]

4. Prateek Pandey and Deepak Sharma, “Digitally Enhanced Adaptive Security: A Solution for Power Theft in Smart Cities”, Energy 4.0: Trends, Challenges, and Applications, Springer Publisher India, May, 2024.

CERTIFICATION COURSES (MOOC COURSES):

1. Seven week course on “Linear Circuits 1: DC Analysis” offered by Georgia Institute of Technology, USA on May 26, 2020
2. Seven week course on “Introduction to Electronics” offered by Georgia Institute of Technology USA on May 15, 2020
3. One week course on “COVID-19 Contact Tracing” offered by John Hopkins University on June 11, 2020
4. Five week course on “Linear Circuits 2: AC Analysis” offered by Georgia Institute of Technology, on June 18, 2020
5. Four week course on “Introduction to the Internet of Things and Embedded Systems” offered by University of California, Irvine on June 21, 2020
6. Seven week course on “Conversational English Skills” offered by Tsinghua University on July 1, 2020
7. Four week course on “Introduction to Research for Essay Writing” offered by University of California, Irvine on July 8, 2020
8. Five week course on “Getting Started with Google Sheets” offered by Google Cloud Services on July 26, 2020
9. Five week course on “Introduction to solar cells” offered by Technical University of Denmark (DTU) on June 23, 2020
10. Four week course on “Grammar and Punctuation” offered by University of California, Irvine June 29, 2020

11. Four week course on “Science of Exercise” offered by University of Colorado Boulder on June 29, 2020
12. Four week course on “Electric Power Systems” offered by University at Buffalo on July 11, 2020
13. Three week lecture series on “Lecture Series for Preventing and Controlling COVID-19” offered by Xi'an Jiaotong University, China
14. Six week lecture series on “Wireless Communications for Everybody” offered by Yonsei University, China. on June 26, 2022
15. Ten week lecture series on “Science of Well-being” offered by Yale University, USA. on December 18,2020
16. Five week lecture series on “Introduction to Solar Cells” offered by Technical University of Denmark, USA. on June 23,2023

WORKSHOP AND FACULTY DEVELOPMENT PROGRAMS ATTENDED:

1. Dr. Deepak Sharma attended one week workshop on “NAAC SSR PREPARATION AND DVV PROCESS” organized by IQAC, Jaypee University of Engineering and Technology, Raghogarh Guna, on October. 10- 14, 2022.
2. Dr. Deepak Sharma attended one week workshop on “Industrial Internet of Things” organized by Department of ECE, Jaypee University of Engineering and Technology, Raghogarh Guna, on December 5-10, 2022.
3. Dr. Deepak Sharma attended one week workshop on “Women at Workplace: Provisions For Safety and Security” organized by Gender Sensitization Cell, Jaypee University of Engineering and Technology, Raghogarh Guna, on December 5-10, 2022.
4. Dr. Deepak Sharma attended one week workshop on “NAAC Assessment and Accreditation Process” organized by IQAC, Jaypee University of Engineering and Technology, Raghogarh Guna, on July 25- 29, 2022.
5. Dr. Deepak Sharma attended one week Workshop on “Outcome based Education and CO-PO Mapping”, organized by IQAC, Jaypee University of Engineering and Technology, Raghogarh Guna on October 17-22, 2022
6. Dr. Deepak Sharma attended two weeks Workshop on “AR-VR-MR” organized by Department of Computer Science and Engineering, Jaypee University of Engineering and Technology, Raghogarh Guna on November 14-26, 2022
7. Completed one week faculty development programme on “Deep Learning and Applications” organized by Electronics and ICT Academies under the Ministry of Electronics and Information Technology (MeitY), Government of India from December 9-23, 2019
8. Completed one week faculty development programme on “Python Programming with Industry Perspective” organized by Electronics and ICT Academies under the Ministry of Electronics and Information Technology (MeitY), Government of India from December 2-6, 2019
9. Completed one week faculty development programme on “VLSI Chip Design Hands-on Using Open Source EDA” organized by Electronics and ICT Academies under the Ministry of Electronics and Information Technology (MeitY), Government of India from December 16-20, 2019
10. Completed one week faculty development programme on “Deep Learning and Applications” organized by Electronics and ICT Academies under the Ministry of Electronics and Information Technology (MeitY), Government of India from May 27-31, 2019
11. I attended a national workshop on “MATLAB Application in Science & Engineering” organized by Dept. of Electronics and Communication held at Jaypee University of Engineering and Technology, Guna during February 11-12, 2017.
12. I attended a national workshop on “High-performance VLSI Architectures for Digital Signal Processing Applications: Design and Implementations” organized by Dept. of Electronics and

Communication held at Jaypee University of Engineering and Technology, Guna during September 9-11, 2016.

13. I attended a workshop on "Ancillary Tools for Research" organized by Dept. of Mathematics and Physics held at Jaypee University of Engineering and Technology, Guna during June 16-18, 2015.

14. I attended a workshop on "Application Oriented Networking" organized by Dept. of Computer Science Engineering held at Jaypee University of Engineering and Technology, Guna during July 9-13, 2012

15. I attended an IUCEE workshop on "Image Processing and Digital Communication" organized by Dept. of Electronics and Communication held at Jaypee University of Engineering and Technology, Guna from June 6-10, 2011.

16. I attended a short terms course on "Digital Signal and Image Processing (DSIP-2010)" organized by Dept. of Electronics and Communication held at Jaypee University of Engineering and Technology, Guna from 5-10 July 2010.

17. I attended a short terms course on "Communication Systems and Networking (CSN-2008)" organized by Dept. of Computer Science Engineering held at Jaypee University of Engineering and Technology, Guna from 5-10 July 2008.