

## CURRICULUM VITAE

### DR. SUNIL DATT SHARMA

Associate Professor,  
Department of Electronics and Communication Engineering  
Central University of Jammu, Jammu and Kashmir, India  
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### PROFILE ON THE WEB

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<https://scholar.google.co.in/citations?user=a4FlICYAAAAJ>

### AREA OF INTEREST/RESEARCH:

- Digital Signal Processing, Adaptive Signal Processing, Time-Frequency Analysis and its applications, Computational Genomics and Proteomics, Bioinformatics, Signal Processing and Machine Learning, Deep learning, Image quality analysis, Signal Processing for Predictive Maintenance and Machine Health Monitoring

### 1. ACADEMIC QUALIFICATION:

- Ph.D.: Electronics and Communication Engineering, M.Tech.: Embedded Systems & VLSI Design, B.E.: Electronics and Instrumentation Engineering

### 2. TEACHING EXPERIENCES:

- Jaypee University of Information Technology, Wanknaghat, Solan H.P.  
Department: Electronics and Communication Engineering  
Position: Associate Professor  
Duration: 1<sup>st</sup> January 2023 to 28<sup>th</sup> Nov 2023
- Jaypee University of Information Technology, Wanknaghat, Solan H.P.  
Department: Electronics and Communication Engineering  
Position: Assistant Professor (SG)  
Duration: 1<sup>st</sup> July 2016 to 31<sup>st</sup> Dec. 2022
- Jaypee University of Information Technology, Wanknaghat, Solan H.P.  
Department: Electronics and Communication Engineering  
Position: Assistant Professor (Gr-II)  
Duration: 17<sup>th</sup> August 2015 to 30<sup>th</sup> June 2016
- Samrat Ashok Technological Institute (Govt. Aided, Estd. 1960), Vidisha, M.P.  
Department: Electronics and Communication Engineering  
Position: Contract Lecturer  
Duration: – 12<sup>th</sup> Aug, 2013 to 14<sup>th</sup> Aug, 2015

### 3. ADMINISTRATIVE EXPERIENCES

- Worked as a Warden of Boy's Hostel since Jan-2018 to 28<sup>th</sup> Nov 2023
- Social media in charge of University (Feb 2022 to 28<sup>th</sup> Nov 2023)
- Active member of Admission cell
- Member of training and development cell
- Placement coordinator of ECE department
- As an expert of NDMA (Govt of India) for the Post Disaster Needs Assessments (PDNA) of Himachal Pradesh
- Member of NAAC /IQAC of Criteria-5
- Member of Mulya Pravash (A task force UGC)
- JYC faculty coordinator
- Member of Moodle committee of JUIT
- Member of Task Force 3-NEP-2020 for JUIT
- Member of Task Force 3-NEP-2020 for JIIT
- Member of Antiaging squad
- Co-opted member of Stock verification Committee
- Member of disciplinary grade evaluation committee 2019-20
- BoS member of ECE JUIT
- Faculty coordinator of faculty selection committee of ECE
- Mentoring Coordinator ECE Department
- Active Member of NBA Accreditation team of the ECE Department at SATI Vidisha.

### 4. PUBLICATIONS

#### Research Papers in IEEE Journal/ Transactions:

1. [Sunil Datt Sharma](#), Sanjeev Narayan Sharma, Rajiv Saxena (2020). Identification of Short Exons Disunited by a Short Intron in Eukaryotic DNA Regions, *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, 17 (5), 1660-1670. [I.F.=4.5] [Doi: 10.1109/TCBB.2019.2900040](#)
2. [Sunil Datt Sharma](#), Rajiv Saxena, Sanjeev Narayan Sharma (2015). Identification of Microsatellites in DNA Using Adaptive S-Transform. *IEEE Journal of Biomedical and Health Informatics*, 19 (3), pp. 1097-1105. [I.F.=7.7] DOI: [10.1109/JBHI.2014.2330901](#)

#### Research Papers in other Reputed Journals

3. Garg, Pardeep, and [Sunil Datt Sharma](#). (2023) "Optimum Window based Modified Periodicity Spectrum Method for the Detection of Protein Coding Regions in DNA Sequences." *Digital Signal Processing*: 104137 <https://www.sciencedirect.com/science/article/abs/pii/S1051200423002324>  
(SCOPUS Indexed, Web of science, SCI). [I.F.=2.9]
4. Thakur, Niveditta, Nafis Uddin Khan, and [Sunil Datt Sharma](#) (2023). "A Two-Phase Ultrasound Image De-speckling Framework by Nonlocal Means on Anisotropic Diffused Image Data." *Informatica* 47, no. 2. <https://www.informatica.si/index.php/informatica/article/view/4378>  
(SCOPUS Indexed, Web of science, ESCI)
5. [Sunil Datt Sharma](#) (2023) "Performance Evaluation of the Signal Processing Based Transfer Learning Algorithm for the Fault Classification at Different Datasets." *Journal of Failure Analysis and Prevention* (2023): 1-11. [HTTP://link.springer.com/article/10.1007/s11668-023-01648-1](http://link.springer.com/article/10.1007/s11668-023-01648-1)  
(SCOPUS Indexed, Web of science, ESCI, I.F.=1.2)
6. Niveditta Thakur, Nafisuddin Khan, [Sunil Datt Sharma](#) (2022). An efficient fuzzy inference system based approximated anisotropic diffusion for image de-noising, *Cluster Computing*, Online (), - <https://doi.org/10.1007/s10586-022-03642-y>  
(SCIE, SCOPUS Indexed, Web of Science, I.F. =4.4)

7. Pardeep Garg, [Sunil Datt Sharma](#) (2022), CpG Islands Detection in Human DNA Sequences using Wavelet Transform, International Journal of Computing and Digital Systems, Vol.11, No. (1), pp. 1093-1105. <https://dx.doi.org/10.12785/ijcds/110188>  
(SCOPUS Indexed)
8. Pardeep Garg, [Sunil Datt Sharma](#) (2022), Modified P-Spectrum-based approach to enhance sensitivity for the detection of CPG Islands In DNA Sequences in human species, Biomedical Engineering - Applications, Basis and Communications, Vol.34, No.1, pp.2150052. <https://doi.org/10.4015/S1016237221500526>  
(SCOPUS Indexed, Web of science, ESCI)
9. Niveditta Thakur, Nafisuddin Khan, [Sunil Datt Sharma](#) (2021), A Review on Performance Analysis of PDE Based Anisotropic Diffusion Approaches for Image Enhancement, Informatica: An International Journal of Computing and Informatics, Vol.45. No. 6, pp. 89-102. <https://doi.org/10.31449/inf.v44i6.3333>  
(SCOPUS Indexed, Web of science, ESCI)
10. Pavan Sharma., Hemant Amhia., [Sunil Datt Sharma](#) (2021), Performance analysis of pre-trained transfer learning models for the classification of the rolling bearing faults, Journal of Physics: Conference Series ,Vol. 2070, No. 1, pp. 012141. <https://iopscience.iop.org/article/10.1088/1742-6596/2070/1/012141/pdf>  
(SCOPUS Indexed)
11. Abhinav Shubham, [Sunil Datt Sharma](#) (2021), Micro-Doppler signature based target recognition using covariance based S-transform. Journal of Physics: Conference Series, Vol. 1921, No.2021, pp.012010. <https://iopscience.iop.org/article/10.1088/1742-6596/1921/1/012010/pdf>  
(SCOPUS Indexed)
12. Pardeep Garg, [Sunil Datt Sharma](#) (2021), CpG Island Identification in DNA Sequences using Modified P-Spectrum based Algorithm. Journal of Physics: Conference Series, Vol. 1921, No.2021 pp.012042 <https://iopscience.iop.org/article/10.1088/1742-6596/1921/1/012042/pdf>  
(SCOPUS Indexed)
13. Pardeep Garg, [Sunil Datt Sharma](#) (2020), Identification of CpG Islands in DNA Sequences Using Short-Time Fourier Transform, Interdisciplinary sciences, computational life sciences, Vol.12, No.3, pp.355-367 <https://doi.org/10.1007/s12539-020-00370-y>  
(SCIE, Web of Science, SCOPUS Indexed, I.F. =4.8)
14. Pardeep Garg, [Sunil Datt Sharma](#) (2020), Sensitivity Enhancement of DWT Based Algorithm for Detection of CpG Islands in DNA Sequences, Procedia Computer Science, Vol.167, No. 2020, pp. 1829-1838 <https://doi.org/10.1016/j.procs.2020.03.202>  
(SCOPUS Indexed)
15. Shilpa Kaushal, [Sunil Datt Sharma](#) , Shruti Jain (2018), Empirical Wavelet Transform Based Classification of Glaucoma from Retinal Fundus Images, Journal of Global Trends in Pharmaceutical Sciences, Vol.9, No.3, pp.5887-5897. <https://www.jgtps.com/admin/uploads/xYFjnW.pdf>  
(ICI Indexed)
16. Nancy Singh, [Sunil Datt Sharma](#) , Raghu M. Yennamalli(2017), Modified S-transform as a tool to identify secondary structure elements in RNA, Bio-Algorithms and Med-Systems, Vol.13, No.4, pp.187-193. DOI: [10.1515/bams-2017-0023](https://doi.org/10.1515/bams-2017-0023)  
(ESCI, Web of Science, SCOPUS Indexed)
17. [Sunil Datt Sharma](#) , Rajiv Saxena, Sanjeev Narayan Sharma (2017), Tandem Repeats Detection in DNA Sequences using Kaiser Window Based Adaptive S-Transform, Bio-Algorithms and Med-Systems, Vol.13, No.3, pp.167-173, DOI: [10.1515/bams-2017-0014](https://doi.org/10.1515/bams-2017-0014)  
(ESCI, Web of Science, SCOPUS Indexed)
18. Jitain Sharma, [Sunil Datt Sharma](#) (2016), Analysis of the multi-component signal using co-variance modified S-transform, International Journal of Advanced Information Science and Technology, Vol.5, No.12, pp.22-24.

#### Book Chapters:

1. Pavan Sharma, Hemant Amhia, [Sunil Datt Sharma](#) (2022), Transfer Learning-Based Model for Rolling Bearing Fault Classification Using CWT-Based Scalograms, In Pandian A.P., Palanisamy R., Narayanan M., Senjyu T., Proceedings of Third International Conference on Intelligent Computing, Information and Control

- Systems, Advances in Intelligent Systems and Computing, (vol 1415, pp. 12). : Springer. [ISBN : 978-981-16-7330-6] .
2. [Sunil Datt Sharma](#) , Pardeep Garg (2021). Integer period discrete Fourier transform-based algorithm for the identification of tandem repeats in the DNA sequences, Machine Learning, Big Data, and IoT for Medical Informatics (pp. 311-325 ). : Academic Press (elsevier). [ISBN : 978-0-12-821777-1] . Google Search  
(SCOPUS Indexed)
  3. Niveditta Thakur, Nafisuddin Khan, [Sunil Datt Sharma](#) (2021). A Comparative Analysis of Edge-Preserving Approaches for Image Filtering. In Harish SharmaMukeshSaraswatSandeepKumarJagdish Chand Bansal, Intelligent Learning for Computer Vision (pp. 441-453). : Springer. [ISBN : 978-981-33-4582-9] . Google Search  
(SCOPUS Indexed)

#### Conference papers:

1. Thakur, Niveditta, Nafis Uddin Khan, and [Sunil Datt Sharma \(2023\)](#). "Cuckoo Search Optimized Histogram Equalization for Low Contrast Image Enhancement." In 2022 IEEE Seventh International Conference on Parallel, Distributed and Grid Computing (PDGC), pp. 727-732.
2. Niveditta Thakur, Nafis Uddin Khan, [Sunil Datt Sharma \(2020\)](#), A Comparative Analysis of Edge-Preserving Approaches for Image Filtering, Proceedings of the Congress on Intelligent Systems [CIS 2020 : India : May 9, 2020], pp.441-453.. Google Citation
3. Shruti Jain, [Sunil Datt Sharma \(2019\)](#), Classification of Glaucoma Fundus Images Using Curvelet Empirical Wavelet Transform. Proceedings of the 2019 Fifth International Conference on Image Information Processing (ICIIP) [Solan, India : 15-17 Nov. 2019], pp.321-325.. Google Citation
4. Pardeep Garg, [Sunil Datt Sharma \(2019\)](#), MGWT based Algorithm for Tandem Repeats Detection in DNA Sequences. Proceedings of the 2019 5th International Conference on Signal Processing, Computing and Control (ISPCC) [Solan, India : 10-12 Oct. 2019], pp.196-199.. Google Citation
5. [Sunil Datt Sharma](#) , Sanjeev Narayan Sharma, Rajiv Saxena (2019), Model Independent Method for Acceptor Splice Sites Prediction in DNA Sequences, Proceedings of the 2019 IEEE Conference on Information and Communication Technology [Allahabad, India : 6-8 Dec. 2019], pp.1-5.. Google Citation
6. Shilpa Kaushal, [Sunil Datt Sharma](#) , Shruti Jain (2018), Investigation of Image Processing Techniques for Glaucoma Detection in Human Eye,. Proceedings of the International Conference on Parallel, Distributed and Grid Computing (PDGC) [5th : Jaypee University of Information technology, Wagnaghat, Solan, H.P, India : 20-22, December, 2018], pp.747-753.. Google Citation
7. Pardeep Garg, [Sunil Datt Sharma](#) , S. N. Sharma (2017), Tandem Repeats Detection in DNA Sequences Using P-Spectrum Based Algorithm, Proceedings of the IEEE Conference on Information and Communication Technology (CICT-2017) [ABV Indian Institute of Information Technology, Gwalior : 3-5 November 2017. ], pp.1-5.. Google Citation
8. Sanyogita Sharma, Kanika Sandal, Pardeep Garg, [Sunil Datt Sharma \(2017\)](#). Performance Analysis of Window Functions for Exon Prediction in DNA Sequences, Proceedings of the Proceedings of IEEE International Conference on Computing, Communication and Automation (ICCCA) [Greater Noida, India, May 5-6, 2017], pp.283-286.. Google Citation
9. [Sunil Datt Sharma \(2016\)](#). Evaluation of time frequency tools for multi-component chirp signals, Proceedings of the International Conference on Signal Processing (ICSP 2016) [ : Vidisha, M.P. India.: 7-9 Nov. 2016], pp.- , Google Citation

## 5. RESEARCH GUIDANCE

### Ph.D. Guided (Award-01, Submitted-01, Ongoing-03)

1. Research Scholar: Pardeep Garg (161002)  
Title: Detection and Localization of the Hidden Patterns in the DNA Sequences Using Signal Processing  
Status: Awarded  
External Examiner: Prof. Ram Bilas Pachauri IIT Indore  
Guidance: Sole guidance  
<https://shodhganga.inflibnet.ac.in/handle/10603/379735>
2. Research Scholar: Mrs. Niveditta (191603)  
Topic: Image quality analysis  
Status: Submitted  
Registered on: July 2019  
Guidance: Joint
3. Research Scholar: Mr. Ravikant Sharma (216005)  
Topic: Predictive maintenance  
Status: Ongoing  
Registered on: Feb.2021  
Guidance: Joint
4. Research Scholar: Mr. Sandeep Thakur (226002)  
Topic: Signal processing  
Status: Ongoing  
Registered on: Sept.2022  
Guidance: Joint
5. Research Scholar: Ms. Anuradha Pathak (A60236421003)  
Topic: Detection and Classification of Heart Arrhythmia Using Signal Processing and Artificial Intelligence  
Status: Ongoing (Amity University Gwalior)  
Registered on: 17.02.2021  
Registration No.: AUMP/Ph.D./ASET/2/2022/213  
Guidance: Joint

### MTech. Project Guided (03)

1. Study the application of the discrete linear chirplet transform, Jitain Sharma (Enrl. No.142002),2016, (Sole Guided).
2. Analysis of chirp and multi-component signals using signal processing methods,Vivek Thakur(Enrl. No.142005)2016, (Sole Guided).
3. Evaluation of Empirical Wavelet Transform for Glaucoma Detection Using Fundus Images, Shilpa Kaushal(162004),2018 (Jointly Guided).

### **BTech Project Guided (15)**

1. Performance Analysis of Signal Processing Based Periodicity Mining Tools, G Rangta, S Mehrotra, 2016-17
2. Identification of Secondary Structure Elements In miRNA Using Signal Processing Method, N Singh, RM Yennamalli, 2016-17
3. Implementation of a telemedicine system for rural healthcare, A Tiwari, R Vats, R Singh, 2016-17
4. Micro-Doppler Signatures Based Target Recognition Using Time-Frequency Analysis Tools, D Sharma, A Shubham, 2016-17
5. Diagnosis of Respiratory Disease using Signal Processing and Machine Learning, R Mittal, S Dang, 2018-19
6. Apple Grading using Image Processing, A Thakur, M Kumar, N Thakur, 2018-19
7. Structural Health Monitoring Using Signal Processing and Deep Learning, K Choudhary, R Singh, 2019-20
8. Promoter Recognition in Human DNA Sequence Using Deep Learning, A Kapoor, U Sharma (2019-20)
9. Classification of cancerous and non-cancerous genes using Signal Processing, Anupam Shrivastava, Saumya Jajodia, 2020-21
10. Classification Of Audio Signals Using Short Time Fourier Transform, Ritwik Sood, Akhilesh Sapehia, 2020-21.
11. Analysis of Machine learning techniques for human activity recognition, Adarsh (181029), 2021-22.
12. Covid-19 detection using Genomics Signal Processing and Machine learning (Tentative), Anajali Rana (191045, ECE), Gaurang Khanna (191033, ECE), 2022-23
13. Respiratory disease detection using Signal Processing and Machine learning (Tentative), Priya Verma (191428, CSE), Ajay Yadav (191422, CSE), 2022-23
14. Heart disease detection using heart sound processing and Machine learning, Riya (191425 CSE), 2022-23
15. Classification of promoter and non-promoter DNA sequences using signal processing and Machine learning, Divyanshu (191382, CSE), 2022-23

### **6. FUNDED RESEARCH PROJECTS**

### **7. CONSULTANCY PROJECTS:**

### **8. PATENTS AND POLICY DOCUMENTS**

- 1) Internet of things-based equipment for control of electric power (373963-001), Indian patent, Govt of India
- 2) Biometric sensors on steering wheel for an electric vehicle (371000-001), Indian patent, Govt of India

### **9. FDP'S OF AT LEAST ONE WEEK DURATION (ORGANIZED)**

1. Coordinator of two-week online faculty development program on Computational Genomics and Proteomics funded by E & ICT Academy (Govt of India initiative) in collaboration with PDPM IIITDM Jabalpur, M.P. from 28th August-10th September, 2022.  
Internal: 05  
External: 52  
Fund received at JUIT (Host Institute) from E & ICT academy of PDPM IIITM: Rs. 10000  
<https://www.juit.ac.in/attachments/OnlineFDP28Aug10Sep.pdf>

2. Coordinator of One Week Online Short-Term Course/Workshop on “Recent Advances in Computational Intelligence for Signal Processing” (RACISP – 2020), 10-15 August-2020  
No. of Participants: 114  
Internal: 43  
External: 71  
<https://www.juit.ac.in/department/Electronics/REPORT-RACISP-2020.pdf>
3. Coordinator of One Week Online Short-Term Course/Workshop on “Recent Advances in Computational Intelligence for Signal Processing” (RACISP – 2020), 10-15 August-2020  
No. of Participants: 114  
Internal: 43  
External: 71  
<https://www.juit.ac.in/department/Electronics/REPORT-RACISP-2020.pdf>

## 10. CONFERENCES/ WORKSHOPS/ SEMINARS (ORGANIZED)

### Organizing committee member:

1. Conference secretary of 3rd Emergent Converging Technologies and Biomedical Systems (ETBS 2023) organized by the Department of Electronics & Communication Engineering and Department of Computer Sciences and Engineering & Information Technology, Jaypee University of Information Technology (JUIT) in collaboration with DST iHub-AWadh and Indian Institute of Technology Ropar at JUIT. <https://www.juit.ac.in/etbs2023/Committees.php>
2. Organizing member of Sixth International Conference on Signal processing Computing and Control (ISPCC 2021), 07-09 Oct. 2021
3. Organizing member of 5th International Conference on Signal Processing, Computing and Control (ISPCC 2019), 10-12 October 2019
4. Organized an expert lecture on Internet of Things, at JUIT, Prof PK Mehar, on 30th March, 2018.
5. Organizing member of 4th IEEE International Conference on Signal Processing, Computing, and Control, at JUIT, 21-23 September 2017
6. Organizing member of IEEE international conference on signal processing, computing and control (ISPCC-2015), at JUIT, 24th -26th September, 2015
7. Organizing committee member of a Two-week Workshop (UNDER TEQUIP\_II) on “Lab VIEW and Its Application” in the department of electronics & communication at SATI, Vidisha, and M.P. on 22nd June-4th July, 2015.
8. Organizing committee member of a National Workshop (UNDER TEQUIP\_II) on Signal Processing in the department of electronics & communication at SATI, Vidisha, and M.P. on 4-6 dec.2014.

### As a Session chair/ Session Coordinator:

1. Session chair in the 2nd Emergent Converging Technologies and Biomedical Systems (ETBS 2022) organized by Department of Electronics and Communication Engineering & Department of Physics and Materials Science, JUIT, Waknaghat, India from September 23 - 24, 2022.
2. Session Coordinator in Sixth International Conference on Signal processing Computing and Control (ISPCC 2021), at JUIT, 07-09 Oct. 2021
3. Session Chair in Sixth International Conference on Signal processing Computing and Control (ISPCC 2021), at JUIT, 07-09 Oct. 2021
4. Session Chair in Sixth International Conference on Image Information Processing (ICIIP 2021), at JUIT, 26-28 NOV. 2021

## 11. MEMBERSHIP OF PROFESSIONAL BODIES

1. Member of the International Association engineers (IAENG) (Membership number is 148733)
2. Life members of International Association of Computer Science and Information Technology (Membership number is 80349792)

3. Senior Member of the Institute of Research Engineers and Doctors (Membership number is SNM20211014443)

## 12. NO. OF INVITED TALKS/LECTURES DELIVERED OUTSIDE

### Resource person/Invited Talk:

2022-23

1. Resource person in two-week online faculty development program on Computational Genomics and Proteomics at JUIT Solan, funded by E & ICT Academy (Govt of India initiative) in collaboration with PDPM IIITDM Jabalpur, M.P. from 28th August-10th September, 2022.
2. Resource person in a High-End Workshop on "Computational Genomics and Proteomics" funded by SERB (DST of India) at PDPM IIITM Jabalpur, M.P., 24-30 July, 2022

2020-21

3. Resource person in an Online Short-Term Course/Workshop on "Recent Advances in Computational Intelligence for Signal Processing" (RACISP – 2020), at JUIT, 10-15 August-2020.  
<https://sites.google.com/juitsolan.in/racisp-2020>

2018-19

4. Resource person in a Short-Term course on Recent advances in signal and Image processing (RASIP-2019), at JUIT, 24-28 June, 2019
5. Resource person in the workshop on National Workshop on Bioinformatics and Biomedical Image Analysis (NBBIA-2019) at JUIT, 29 - 31 May, 2019

2015-16

6. Expert lecture delivered in bioinformatics department on the topic "Signal Processing for Genomics Data Analysis", March 1, 2016.
7. Resource person in a two-week training program on "LabVIEW and Its application" organized by department of ECE, BME and E&I at SATI, Vidisha, M.P., on 22 June- 4<sup>th</sup> July, 2015

### External examiner/Paper Setter

2020-21

1. Conducted lab examination as an external expert online "Fundamental of Instrumentation" on 20-01-21, at SATI (Govt. Engg. College), Vidisha
2. Conducted lab examination as an external expert online "MATLAB" on 20-05-21, at SATI (Govt. Engg. College), Vidisha
3. Conducted lab examination as an external expert online "Fundamental of Instrumentation" on 20-05-21, at SATI (Govt. Engg. College), Vidisha

2017-18

4. Final examination question paper setting of Samrat Ashok Technological Institute (Govt aided Autonomous institute) Vidisha, M.P. for the subject, VLSI design(B.E.), 2017-18

2016-17

5. Final examination question paper setting of Samrat Ashok Technological Institute (Govt aided Autonomous institute) Vidisha, M.P. for the subjects, Linear ICs (For B.E.), Process control (B.E), Vlsi design(B.E.), Probability and random process (M.Tech.), 2016-17

## 13. INVOLVEMENT IN EXTRA CURRICULAR ACTIVITIES UNIVERSITY/DEPARTMENT

### SDP/WORKSHOP ATTENDED:

#### One/two week

1. Attended National Level Two Weeks Workshop on "Growing Role of Machine Learning in Cyber-Security", 13th - 24th June, 2022, JUIT



2. Attended Workshop on "Data Analytics and its Research Perspectives", 6th - 11th June 2022 in hybrid mode (Online and Offline), JUIT
3. Attended Completed course at Coursera on "Neural Networks and Deep Learning", 4-week course September 21 to Jan2022, Coursera platform
4. Attended work shop on "NEP 2020 Implementation in Higher Education Institutes", 09-13 may 2022, NITTR CDG
5. Attended & Completed course on "Python Programming Course", 3 days (9 hours) Jan-2022, Learn Vern pvt ltd Under Kashal Bharat & Kushal Bharat
6. Attended Online FDP on "Role of IoT and Wireless Sensor Network in Knowledge Engineering", 14-19 September2020 (one week), Atria Institute of Technology Bangalore,
7. Attended One week workshop "Industry 4.0 and Smart Manufacturing: Opportunities and Challenges", 20-24 Juy2020(one week), NIT Jalandhar& AICTE
8. Attended Online FDP on "Research Aspect on Signal and Image processing ", 27-31 Juy2020 (one week), MSAJCE, Chennai
9. One week workshop on "Computational Intelligence Techniques for Machine Learning", 31-08-20 to 05-09-20 (one week), JUIT, CSE
10. Attended FDP on "Recent trends in Beyond 5G", 19-23 September 2020(one week), Ujjain Engineering College(Govt Engg College), Ujjain
11. Attended a short-term course on "Deep Learning for Image processing: Overview, Challenges and Future" organized by NITTR Chandigarh conducted at JUIT Waknaghat. 24-02-2020 to 28-02-2020.
12. Attended National workshop on Bioinformatics and biomedical Image analysis, 29-31, May 2019, JUIT
13. Attended one-week Short Term course on "Recent advances in signal and Image processing", One weak short-term course( 24th -28th June,2019), JUIT
14. Attended FDP on "Recent Trends on Machine Learning for signal Processing", 20-25, May 2019, JUIT,
15. Attended one Week AICTE sponsored STC on "Artificial Neural Network and Fuzzy Logic through ICT" 23-27 July 2018, NITTR, CDG.
17. Attended National Work shop on "statistical techniques in biological and medical sciences"., 4-9,June 2018, JUIT
18. Attended FDP on "Emerging Trends in VLSI and Communication", 09-18,June 2018, IEEE student chapter & JUIT
19. Attended STC on "Cloud computing through ICT", 23-27 October 2017, NITTR, CDG,
20. Attended STC on "Wireless and mobile communication", 30th October to 3rd November 2017, NITTR, CDG,
21. Attended a two-week AICTE sponsored staff development program on the topic, "Recent Trends in Signal Processing", at Samrat Ashok Technological Institute, Vidisha M.P. (Sept.2011).

### **One/two/three days**

22. Attended One day "National Science Day symposium", 28-02-2022,
23. Attended Webinar on " Building Video AI Applications at the Edge on Jetson Nano, 28-01-2022, NVIDIA DLI
24. Attended workshop on Learning Python, Jan-2022, link din platform
25. Attended Attended workshop on Introduction to Artificial Intelligence, 09-01-2022, Simplilearn online platform
26. Attended course on introduction of cloud computing, 27-12-2021, Simplilearn
27. Attended Machine learning on ramp 09-06-2021 from math works
28. Attended One day Webinar/workshop "Evolution or Revolution? The All-Ethernet In-Vehicle Network", 28 August 2020, IET online,
29. Attended One day Webinar/workshop on "Robotic operating System", 27-07-2020, ADAMA Science & technology University online
30. Attended One day Webinar/workshop "New Product Development Challenges through Covid 19", 15 July 2020, IET online,
31. Attended One day Webinar/workshop "The Future of Industrial Cyber Security - (Operational Technology vs Cyber-Physical)", 24 July 2020, IET Online
32. Attended One day Webinar/workshop "IoT, Edge, and Robotics for Modern healthcare systems", 30 July 2020, IEEE online
33. Attended One day Webinar/workshop "Software Safety: Challenges, security and developments", 28-07-2020, IET online.

34. Attended One day Webinar/workshop "Electromagnetic Waves: Successfully Surfing the Subject", 24-07-2020, IET online
35. Attended One day Webinar/workshop "DEMYSTIFYING DATA SCIENCE AI AND ML" ", 23-july 2020, Dr. N.G.P. INSTITUTE OF TECHNOLOGY
36. Attended One day Webinar/workshop "Brain Computer Inter face and research opportunities" ", 21 july 2020, AISSMS Institute of Information Technology and Pantech.
37. Attended Webinar on "Research and Innovation to lead smart world", 10-09-20, JUIT ECE
38. Attended a virtual global summit on Artificial Intelligence: Responsible AI for Social Empowerment, 20-11-2020, Govt of India
39. Attended Webinar on "Telecom Technologies, their evolution and RF optimization of KPIs. 19-09-2020, JUIT ECE
40. Attended Webinar on "Introduction of AR –VR and the way it is transforming the we live in, 05-09-2020.JUIT ECE
41. Attended webinar on "Interdisciplinary approaches to improve resiliency at scales for humans and ecosystem to thrive", 29-08-2020, JUIT ECE
42. Attended webinar on Strategy for effective teaching, 07-08-2020, JUIT
43. Attended on Introductory work shop on MATLAB, 07-08-2020, JUIT
44. Attended Lecture of prof Pankaj Jalote Distinguish professor IIIT Delhi On "Building research Universities in India", 18-03-2020, JUIT
45. Attended Lecture of prof Manpreet Singh Manna( Ex director AICTE) On "Opportunities in online education", 10-03-21
46. Attended One day webinar on Face Recognition using deep learning organized by BITS Warangal, 30-06-20
47. Attended One day webinar on Internet of things using Node MCU organized by SKITS, Indore, 23-06-20
48. Attended One day webinar on AI for health care applications organized by CIT Chennai, 27-05-2020
49. Attended One day webinar on Opportunities for engineers at DRDO organized by CIT Chennai, 25-05-2020
50. Attended one day webinar on IOT based solution to fight with COVID-19, 22-05,2020
51. Attended one week Faculty Development Programme on R, 28-04-20 to 02-05-20
52. Attended a webinar "AI and Engineering for Healthcare Crises: Rapid Response Strategies for Covid-19"by IET, 12 June 2020.
53. Attended a webinar "The Evolution & Future of the Industrial Control Network" by IET, 12 June 20
54. Attended post Covid Awareness & Opportunities, 8 June 20
55. Attended a webinar "AI for Drug Discovery in the Epidemic Era" by IET , 10 June 2020
56. Attended workshop on Emerging Areas of Research in Image Processing (ERIP-2020) organized by ECE department at JUIT Waknaghat, 6-12 January 2020.
57. Attended three days' workshop on "Perception towards IPR" organized by IPR cell at Jaypee University of Information Technology, Himachal Pradesh, India, 10-12 February 2020
58. Attended three days' workshop on "Biomedical Signal Processing in Computer Vision - Techniques and Advancements" by the experts from AD Instruments, New Delhi at Jaypee University of Information Technology, Himachal Pradesh, India., 10-12 October 2019
59. Attended three days' workshop on "Computational Tools and Techniques for Biomedical Signal Processing- Advances in Biomedical Engineering" by the experts from Biopac, New Delhi, India from October 10-12, 2019, at Jaypee University of Information Technology, Himachal Pradesh, India.
60. Attended training session of IEEE (ASPP Online) for JUIT conducted by LRC JUIT, 21 April 2020.
61. Attended work shop on MATLAB 2018b and recent toolbox add-ons, January 10, 2019, JUIT
62. Attended a NPTEL workshop conducted by IIT Roorkee, 15 June 2019, IIT Roorkee and JUIT,
63. Attended one day workshop on "Patent filing procedures and Geographical indications of Himachal Pradesh, 30 November 2018, JUIT, Waknaghat,
64. Attended work shop "Massive open online course", 15th September, 2017, NPTEL, ACM & JUIT
65. Attended work shop "Patent Drafting", 13th October, 2017, HIMCOSTE & JUIT,
66. Attended National symposium on "Medical image, processing, and analysis", 20-22 November 2017, ICMR &JUIT Waknaghat
67. Attended one Day IPR workshop on "Innovation and Intellectual Property Rights, 9th Dec 2016, HPIC, at JUIT Waknaghat, H.P.

68. Attended one day workshop on “Patent filing & geographical indications”, 27th Feb 2017, JUIT, at JUIT Waknaghat, H.P.
69. Attended One day workshop on “Virtual Labs”, 28th Feb 2017, IIT Delhi, at JUIT Waknaghat,
70. Attended One day seminar on “startups& innovative projects”, 16th May 2017, HPCED At JUIT, Waknaghat, H.P.
71. Attended a one-week Faculty development program on “Signal Processing and Its Application”. 13-18 January, 2016 at JUIT
72. Attended a National Workshop (UNDER TEQUIP\_II) on Signal Processing in the department of electronics & communication at SATI, Vidisha, M.P., on 4-6 dec.2014.
73. Attended a workshop on “Author workshop National Live WebEx by Keith Lambert” at Ashok Technological Institute, Vidisha M.P. (Sept.2013).

#### **14. AWARDS/ACHIEVEMENTS:**

1. Fund Rs. 10000, received at JUIT (Host Institute) from E & ICT academy of PDPM IIITM for hosting an online FDP
2. Received best research paper award on “CpG islands identification in DNA sequences using modified P-spectrum based algorithm” in ICASSCT-2021 at Goa University.
3. Best presented paper Award to the “Evaluation of DNA mapping schemes for exon detection” in IEEE international conference ‘ICCCET 2011’, March, 2011.
4. Neural Network and deep learning (Completed course with certificate from Coursera)
5. Introduction to python programming (Completed course with certificate)
6. Completed GIAN course on “COGNITIVE SPEECH PROCESSING”, 21-25 feb-2022, IIT DHARWAR
7. TPC member and reviewer of the reputed international conferences
8. Reviewer of the following SCI, SCIE, and Scopus indexed Journals
  - Applied soft computing. (1)
  - Applied soft computing. (1)
  - Biomedical signal processing and control. (3)
  - Biomedical signal processing and control. (1)
  - Computer methods and programs in biomedicine. (1)
  - Computer methods and programs in biomedicine. (1)
  - Computers in biology and medicine. (6)
  - Computers in biology and medicine. (3)
  - Healthcare technology letters. (1)
  - IEEE transactions on circuits and systems for video technology. (2)
  - IETE journal of research. (1)
  - Innovation and emerging technologies. (2)
  - International Journal of Computing and Digital Systems. (1)
  - Iranian journal of mathematical sciences and informatics (1)
  - Journal of electronic science and technology. (1)
  - Mechanical systems and signal processing. (1)
  - Pattern recognition. (2)
  - Pattern recognition. (1)
  - Pertanika journal of science & technology (2)
  - Sadhana. (1)
  - Technology. (2)
  - The Egyptian Journal of Medical Human Genetics. (5)

#### **15. OTHER EXPERIENCES**

1. Editorial board member of “E-Samvad” a magazine published by Dept of ECE at SATI, Vidisha, M.P.