Resume

Dr. Sunandan Mandal

Address: ***S/O A K Mandal, Ward No. 58, Street No. 06, Near Solanki Medical, Sai Nagar, Urla Road, Durg, PIN-491001, Chhattisgarh***

Mobile No.: ***+919981374755***
Email ID:
sunandan.mandal12@gmail.com

Educational Qualification: -

UGC-National Eligibility Test

- **UGC-NET JRF in Electronics (December 2015)**

Pandit Ravishankar Shukla University, Raipur

- **Ph. D. (Electronics): - (2023)**
- **M. Tech. (Optoelectronics & Laser Technology): - 76.9% (2012)**
- **M. Sc. (Electronics): - 59.21% (2009)**
- **B. Sc. (Electronics): - 61.5% (2007)**

Chhattisgarh Board of Secondary Education, Raipur

- **12th (Higher Secondary School Certificate Exam): - 67.6% (2004)**
- **10th (High School Certificate Exam): - 63.4% (2002)**

Computer Skill: -

- **Programming Applications : - C, C++ ,VB6 , Matlab**
- **Operating System : - Ms-Dos, Windows-98, Windows-XP, Windows server 2003, Linux (RHEL5)**
- **Awareness : - Hardware & Networking**

Project: -

- **"Fabrication and testing of two terminal laser diode devices by implementing several processing steps" at Raja Ramanna Centre for Advanced Technology, Indore during M. Tech.**
- **"Microcontroller based Ring tone player" during M. Sc.**

Teaching Experience: -

- Twenty Two months teaching experience as a Guest Faculty in SOS in Electronics & Photonics Pt. Ravishankar Shukla University, Raipur.

Instrument Handled: -

- Vacuum Coating Unit (12A4D) for multilayer metal contact formation on diode laser
- HYBOND 626 bonding machine for wire bonding on laser diode
- Diode testing setup to test the laser diode
- Die bonding setup

List of publications and participations: -

[A] In international/national journal

1. Sunandan Mandal, Kavita Thakur, Bikesh Kumar Singh, Heera Ram, **"Two channel EEG classification of imagined speech brain waves using machine learning technique"**. International Journal of Current Engineering and Scientific Research (IJCESR), pp. 1095-1102, Volume 6, No. 1, 2019, Print ISSN: 2393-8374, Online ISSN: 2394-0697.
2. Sunandan Mandal, Kavita Thakur, Bikesh Kumar Singh, **"Grayscale Based Spectral Information of EEG Signals for Classification of Epileptic Seizure"**. Alochana Chakra Journal, pp. 394-405, Volume 9, No. 5, May 2020, ISSN: 2231-3990.
3. Sai Krishna Tikka, Bikesh Kumar Singh, S. Haque Nizamie, Shobit Garg, Sunandan Mandal, Kavita Thakur, and Lokesh Kumar Singh, "**Artificial intelligence-based classification of schizophrenia: A high density electroencephalographic and support vector machine study"**. Indian Journal of Psychiatry, pp. 273-282, Volume 62, No. 3, May 2020, DOI: 10.4103/psychiatry.IndianJPsychiatry_91_20, ISSN: 0019-5545 Online ISSN: 1998-3794, Published by Wolters Kluwer – Medknow, in PubMed, **SCIE & Scopus indexed**, IF(2020): 1.17.
4. Sunandan Mandal, Kavita Thakur, Bikesh Kumar Singh, Heera Ram, **"Performance Evaluation of Spectrogram Based Epilepsy Detection Techniques Using Gray Scale Features".** Journal of Ravishankar University (Part-B: Science), pp. 01-07, Volume 33, No. 1, July 2020, DOI: 10.52228/JRUB.2020-33-1-1, ISSN: 0970-5910.
5. Sunandan Mandal, Bikesh Kumar Singh, Kavita Thakur, **"Classification of working memory loads using hybrid EEG and fNIRS in machine learning paradigm"**.

IET Electronics Letters, pp. 1386-1389, Volume 56, No. 25, November 2020, DOI: 10.1049/el.2020.2710 , Print ISSN 0013-5194, Online ISSN 1350-911X, Wiley Publisher, **SCIE**, IF(2020): 1.314.

6. Sunandan Mandal, Bikesh Kumar Singh, Kavita Thakur, **"Majority voting-based hybrid feature selection in machine learning paradigm for epilepsy detection using EEG"**. International Journal of Computational Vision and Robotics, pp. 385-400, Volume 11, No. 4, April 2021, DOI: 10.1504/IJCVR.2021.116558, Print ISSN: 1752-9131 Online ISSN: 1752-914X, Inderscience Publisher, **Scopus Indexed**.
7. Sunandan Mandal, Bikesh Kumar Singh, Kavita Thakur, **"Epileptic seizure detection using deep learning based long short-term memory networks and time-frequency analysis: A comparative investigation in machine learning paradigm"**. Accepted in Brazilian Archives of Biology and Technology, Online ISSN 1678-4324, Inst Technologia Parana, **SCIE & Scopus indexed**, IF(2022): 0.797.

[B] In book chapter

1. Sunandan Mandal, Manvendra Thakur, Kavita Thakur, & Bikesh Kumar Singh, **"Comparative investigation of different classification techniques for epilepsy detection using EEG signals"**. In Advances in Biomedical Engineering and Technology (pp. 413-424). Springer, Singapore. 2021, DOI: 10.1007/978-981-15-6329-4_34, Print ISBN: 978-981-15-6328-7 Online ISBN: 978-981-15-6329-4, **Scopus Indexed**.

[C] Oral/Poster presentation in conference

1. Presented a poster titled "Imagined speech recognition using EEG: Current and Future Perspective" in National conference on Signal processing, Sustainable Energy Materials and Astronomy and astrophysics (NSSEMA-2017) organised by School of studies in Electronics & Photonics, School of studies in Physics & Astrophysics, PRSU Raipur and Luminescent Society of India held during 28^{th} -30^{th} March, 2017 at Pt. Ravishankar Shukla University, Raipur.
2. Presented a paper titled "Detection of Epileptic Seizure by Analysis of EEG Signals Using Wavelet Based Statistical Features" in Chhattisgarh Young Scientist Congress 2018 organised by Durg University, Durg held during 27^{th} -28^{th} February 2018 at Govt. VYT PG Autonomous College, Durg & Bhilai Institute of Technology, Durg.
3. Presented a paper titled "Two channel EEG classification of Imagined speech brain waves using machine learning technique" in International Conference on

Multifunctional Advanced Materials ICMAM-2018 organised by Kamla Nehru Mahavidyalaya, Nagpur and Dharampeth M. P. Deo Memorial Science College, Nagpur held during 5th -7th October 2018 at Venue Hotel Ganga Kashi Jagnade Square, Nagpur.

4. Presented a paper titled "Comparative investigation of different classification techniques for epilepsy detection using EEG signals" in International Conference on Biomedical Engineering Science and Technology: Roadway from Laboratory to Market, ICBEST-2018 organised by Department of Biomedical Engineering, National Institute of Technology, Raipur held during 20th -21st December 2018 at National Institute of Technology, Raipur.
5. Presented a paper titled "Majority voting based gray scale spectrogram features estimation for classification of Epileptic seizure" in National Conference on Advanced Materials and Environmetal Sciences NCAMES-2019 organised by Department of Physics, Kalinga University, Naya Raipur held during 14th -15th October 2019 at Kalinga University, Naya Raipur, Chhatisgarh.
6. Presented a paper titled "Gray scale based Spectral information of EEG signals for classification of Epileptic Seizure" in International Conference on Advanced Functional Materials, AFM-2020 organised by Kamla Nehru Mahavidyalaya, Nagpur in association with Association of Chemistry Teachers (ACT) held during 23rd -25th January 2020 at Hotel Tuli Imperial, Ramdaspeth, Nagpur, Maharashtra.

[D] Workshop/Seminar/Webinar Attended

1. Participated in Short term training program on "Machine Learning" organised by Department of Electronics and Telecommunication Engineering, NIT Raipur held during 28th August – 1st September 2017 at NIT, Raipur
2. Participated in Short term training program on "Soft Computing Techniques & Robotics" organised by Department of Information Technology, NIT Raipur held during 4th -8th September 2017 at NIT, Raipur.
3. Participated in International workshop on Applied Machine Learning (IWAML-2018) organised by National Institute of Technical Teachers' Training & Research (NITTTR), Kolkata held during 19th – 23rd February 2018 at NITTTR, Kolkata.
4. Participated in National Workshop 2018 on "Plagiarism and IPR: A prime concern for academia" organised by Pt. Sundarlal Sharma Library & SOS in Library & Info. Science, PRSU Raipur and Govt. Nagarjuna PG College of Science, Raipur held

during 2nd – 3rd June 2018 at Pt. Ravishankar Shukla University, Raipur.

5. Participated in International School on Deep Learning in SAR and Hyperspectral Remote Sensing (DL-SHyRS) 2018 organised by Center for Soft Computing Research (CSCR), Indian Statistical Institute (ISI), Kolkata held during 29th October – 2nd November 2018 at Indian Statistical Institute (ISI), Kolkata.
6. Participated in Computer Interfaced Science Experiments using ExpEYES organised by School of studies in Electronics & Photonics and Institute of Renewable Energy Technology & Management, PRSU, Raipur jointly with Inter-University Accelerator Centre, New Delhi held during 30th March – 31st March 2019 at School of studies in Electronics & Photonics, PRSU, Raipur.
7. Participated in International Seminar on Recent Advances in Sensors for Human Healthcare organised by School of studies in Electronics & Photonics and Institute of Renewable Energy Technology & management, PRSU Raipur under the aegis of Public Outreach Center, PRSU Raipur held on 29th November 2019 at Pt. Ravishankar Shukla University, Raipur.
8. Participated in Short Term Training Program on Machine Learning Applications in Biomedical Signal and Image processing organised by Department of Biomedical Engineering, National Institute of Technology Raipur held during 2nd March – 6th March 2020 at Department of Biomedical Engineering, National Institute of Technology Raipur.

Personal Profile:-

Name	: -	**Sunandan Mandal**
Father's name	: -	**Mr. A. K. Mandal**
Mother's name	: -	**Mrs. Shyamali Mandal**
Date of Birth	: -	**01-02-1987**
Sex	: -	**Male**
Marital Status	: -	**Unmarried**
Languages Known	: -	**English, Hindi, Bengali.**
Nationality	: -	**Indian**
Hobbies	: -	**Singing, Operating computer**

Declaration:-

I hereby declare that the above statements are true to the best of my knowledge and belief.

Place: Durg

Date: 21 - 02 - 2023 **SUNANDAN MANDAL**