Dr. D.K. Ravish

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Dr. D. K. Ravish obtained his B.E., in Electronics and Communication Engineering from Mangalore University, India and the M.Tech in Biomedical Instrumentation from Visvesvaraya Technological University, Belagavi, Karnataka, India and Ph.D. degree from Anna University, Chennai, India. Post Doctoral Fellowship in Computer Science and Engineering from Srinivas University, Mangaluru. He is currently working as Associate Professor and Head in the Department of Electronics and Telecommunication, Dr.Ambedkar Institute of Technology, Bengaluru, Karnataka. His areas of research include Electronics and Communication Engineering, Instrumentation, Signal processing, Medical Devices, Wearable physiological monitoring, Telemedicine, Brain computer Interface, Data Science and Machine Learning. He is a member of Indian Society for Technical Education (MISTE), Institution of Engineers (MIE), Fellow member of Institution of Electronics and Telecommunication Engineering (FIETE), member of Biomedical Engineering Society of India (BMESI), senior member of Institute of Electrical and Electronics Engineers (IEEE) and member of Institute of Scholars, professional member of Institute of Scholars and reviewer.

Member of Professional body:

Sl. No.	Institutions	Capacity	Duration
1.	ISTE (LM-32833)	Life Member	2002
2.	MIE (M-129261-1)	Life Member	2005
3.	IETE (M-190646)	Life Member	2007
4,	FIETE (F-190646)	Fellow Member	2007
5.	Biomedical Engineering Society of India (BMESI-LM-1054)	Life Member	2013
6.	IEEE (92282786)	Professional Member Senior Member	2013 Since 2017
7.	Institute of Scholars (InSc 2020 610E)	Professional Member	2020
8.	Fellow InSc	Professional Member	2021
9.	FIE (M-129261-1)	Fellow Member	2023

Achievements:

1. **IEEE Student Branch Counsellor** Dr.AIT (R20) Bangalore 2013-15

2. Achieved "**ELITE**" certificate in "Python for Data Science" NPTEL certification course – 2023
   SWAYAM funded by MHRD Govt. of India.

4. **5-Star Galaxy Level 1** – 2020 mathworks.com

5. Certificate awarded "**ELITE**" for the course Soft Skills – 2019 SWAYAM funded by MHRD Govt. of India.
6. IIC Dr. AIT President since 2020

Outreach Activities:

Sl.No.	Date Duration	Outreach Activity
1.	24.09.2022 (Total 15 Sessions of 30 contact hours) **IIC ID**: IC201810501 IA/Foundation/1017694	Innovation Ambassador (IA) training "**Foundation Level**" (Total 15 Sessions of 30 contact hours) conducted in online mode by MoE's Innovation Cell & AICTE during the IIC calendar year 2022-23
2.	29.09.2022 (Total 15 Sessions of 30 contact hours) **IIC ID**: IC201810501	Innovation Ambassador (IA) training "**Advanced Level**" (Total 15 Sessions of 30 contact hours) conducted in online mode by MoE's Innovation Cell & AICTE during the IIC calendar year 2021-22
3.	31.08.2021 (Total 15 Sessions of 30 contact hours) **IIC ID**: IC201810501 E- certificate No: IA/Re-skilling/1017694	Innovation Ambassador (IA) training "**Reskilling**" (Total 21 Sessions of 21 contact hours) conducted in online mode by MoE's Innovation Cell & AICTE during the IIC calendar year 2022-23
4.	Sep.202 to Aug 2023 Centre for Outreach and Digital Education (CODE) Programme through Digital skill Academy DSA05328826	**Advanced Certificate in data science and AI** from Sep 2022 to Aug 2023 CODE, IIT Madras- Digital skills Academy's Programme

Patent: Applied and published:

Inventory Process Patent: ELECTROENCEPHALOGRAM SEIZURE DETECTION AND PREDICTOR Field of Invention: BIO-MEDICAL ENGINEERING	Intellectual Patent India Application No:201841022906 Date of Filing:19/06/2018	Patent published Patent Office Journal No. 26/2018 pp.24088, dated 29/06/2018.	Status: ✓ PUBLICATION OF THE PATENT ✓ Request for Examination 23/05/2019 ✓ Hearing held on 05/08/2024
Title of the invention: WEIGHTED FUNDUS PHOTOGRAPHY FEATURES FOR AUTOMATIC EARLY DETECTION OF GLAUCOMA USING DISC DAMAGE LIKELIHOOD SCALE Field of Invention: BIO-MEDICAL INSTRUMENTATION	Application No.202041029857	Date of filing of Application : 14/07/2020	Status: ✓ GRANTED
Design Patent: DEVELOPMENT OF AN ARTIFICIAL INTELLIGENCE-DRIVEN MICROBIOREACTOR FOR ENHANCED BIOPROCESSING	Application No.416993-001 Cbr Number:208298	Date of filing of Application : 15/05/2024	✓ PUBLICATION OF THE PATENT ✓ APPLICATION UNDER PROCESS

International Journals

1. **Ravish D.K.** , S. Shenbaga Devi, "*Automated   Seizure Detection and Spectral Analysis of EEG Seizure   Time Series*", European Journal of Scientific Research, ISSN 1450-216X Vol.68 No.1 (2012), pp. 72-82.
   URL:http://www.europeanjournalofscientificresearch.com

2. **Ravish D.K.** ,S. Shenbaga Devi, S.G.Krishnamoorthy and M.R.Karthikeyan, "Detection of Epileptic Seizure in EEG Recordings by Spectral method and Statistical analysis", Journal of Applied Sciences, ISSN 18125654 Vol.13,Issue:2 (2013), pp.207-219.
   DOI:10.3923/jas.2013.207.219, URL:http://scialert.net/abstract/?doi=jas.2013.207.219

3. **Ravish D. K.**, Shenbaga Devi, S & Krishnamoorthy, S G, 2015, "*Wavelet Analysis   of EEG for seizure detection: coherence and phase synchrony Estimation*", Biomedical Research, vol.26, no.3, ISSN: 0970-938X, pp. 512-524.
   URL: http://www.biomedres.info/biomedical-research

4. Shanthi K J, **Ravish D. K.**, "*A Guide To Practical Implementation Of Wavelet Filters For Image De-Noising*", IOSR Journal of Electronics and Communication Engineering (IOSR-JECE), e-ISSN: 2278-2834, pp- ISSN: 2278-8735.Volume 12, Issue 3, Ver. I (May -Jun. 2017), pp. 44-48.
   URL: http://www.iosrjournals.org

5. **Ravish D K**, Dr.Shanthi K J, "*Parametric Spectral Estimation of Transient Otoaccoustic Emission for Auditory Function Measurements*", International Journal of Innovative Research in Science and Engineering, ISSN (O) 2454-9665, ISSN (P) 2455-0663, Vol.03, Issue 07, July 2017, pp.7-20.
   URL: http://www.ijirse

6. Shanthi KJ, Kamala C, **Ravish D. K.**, "*Neural Network Based Drowsiness Detection System Using Physiological Parameters*", International Journal of Emerging Trends & Technology in Computer Science (IJETTCS), ISSN NO: 1076-5131, Volume VI, Issue I, January/2019, pp.3688-3693.
   URL: http:// www.ijettcs.org

7. **Ravish D. K.**, Shanthi KJ, Nayana R Shenoy, "*Design Of Pneumogram For Chronic Obstructive Pulmonary Disease Diagnosis*", JASC: Journal of Applied Science and Computations, ISSN: 1076-5131, Volume VI, Issue I, January/2019, pp.3688-3693.
   URL: http:// www.j-asc.com
   DOI:16. 10089.JASC. 2018.V6I1.453459.1500918

8. Ravish D. K., Dinesh Nayak S, Sathish Kumar V., "Nonlinear Analysis of EEG for Detection of Seizure Onset Zone", International Journal of Advanced Science and Technology, vol.29, No.05, pp.9255-9262, May 2020. ISSN: 2005-4238
   URL: http://sersc.org/journals/index.php/IJAST/article/view/19009
   https://www.scopus.com/sourceid/21100829147?origin=recordpage

9. **Ravish DK**, Dinesh Nayak S, Sathish Kumar V., "Artificial Neural Networks ", Based Epileptic Seizure Prediction for Human Environmental Conscientiousness", Journal of Green Engineering, ISSN: 2245-4586, Vol. 10, Issue 10, November 2020, pp. 8643-8662.
    URL: http://www.jgenng.com/volume10-issue10-2.php
    https://www.scopus.com/sourceid/21100237401

10. Manjunatha AP, **Ravish DK**, "Revisiting Electrical Safety Design and Risk Management for Medical Devices", LINO Journal, ISSN: 0211-2574, Vol. 11, Issue 02, February 2021, pp. 1-10.
    URL: http://linojournal.com/index.php/vol11issue2/

11. Praveena R., Ravish DK., Ganesh Babu T.R. and Preetha J., "Design and Development of Vibroarthogram Screening Device and Assessment of Joint Motion in the pursuit of Signal Processing", ICTACT Journal, ISSN: 0976-9102 (ONLINE), Vol.11, Issue 04, May 2021, pp. 2453-2459.
    URL: http://ictactjournals.in/paper/IJIVP_Vol_11_Iss_4_Paper_6_2453_2459.pdf
    DOI: 10.21917/ijivp.2021.0349

12. **Ravish DK**, Nayana R Shenoy, Kamala C., Seema B S, "Design and Development of Pressure Measurement and Calibration Device in Practice of Compression Therapy for Treating and Prevention Venous Ulcers", Journal of Aerospace Engineering & Technology,
    ISSN: 2231-038X (Online) ISSN: 2348-7887 (Print) Volume 13, Issue 3, 2023.
    DOI (Journal): 10.37591/JoAET

13. **D K Ravish**, Krishna Prasad K, "Recording of ECG for Detection of Heart Abnormalities Using ESP32 and Ubidots", International Journal of Enhanced Research in Science, Technology & Engineering, ISSN: 2319-7463, Vol. 13 Issue 5, pp.45-54, May-2024.

14. **D K Ravish**, Krishna Prasad K, "Analysis of ECG Recordings for Detection of Myocardial Infarctions", Venus International Foundation (CAM) ISSN: 978-81-969897-8-1, Aug 2024.

15. **D K Ravish**, Krishna Prasad K, "Automated Real-time Detection and Prediction of Electrocardiogram abnormalities Using Data Analytics", International Journal of All Research Education and Scientific Methods (IJARESM), ISSN: 2455-6211, Volume 12, Issue 11, November-2024.

International Conference

1. Ravish D K , Dr.Shanthi K J, Chethan R. B ,2016, 'Remote healthcare systems for smart cities', International Conference on Development of Smart Cities: Interface, Governance and Technology, Dr.Ambedkar Institute of Technology .

2. Dr.Ganesh babu , **Ravish D K** , Mahesan K V, 2016, 'Exploitation of Internet of Things - Applications for Smart Cities', International Conference on Development of Smart Cities: Interface, Governance and Technology, Dr.Ambedkar Institute of Technology

3. K J Shanthi , **Ravish D K**, Manjunatha A P, "Neural Network Based Drowsiness Detection System Using Physiological Parameters", IEEE, WIECON 2016, Bangladesh.

4. K J Shanthi Sasikumar, **Ravish D K**, Image Processing an Early Detection to Alzheimer's disease; IEEE INDICON Organized by IIT,   Bombay, 2014.

5. Ravish D.K, K J Shanthi, Nayana R shenoy, Nisarg, "Heart Function Monitoring, Prediction and Prevention of Heart Attacks:Using   Artificial Neural Networks" International Conference on Contemporary Computing and Informatics (IC3I) 2014.

6. Ravish D.K., "The Potential of Image Processing and the need for the software to accelarate   its exploitation for Cytoheammatolgy Proficiency Testing, International   Conference on Resource Utilisation and Intelligent System 2006,Kongu College   of   Engineering,   Perundurai, Erode, TN., India.

7. Ravish D.K., Shiva prakash Koliwada, "Spectral Analysis of EEG during Electro Convolsive Therapy", MATLAB SIMULINK 2005,International Technical Paper Symposium , Cranes Software INC.,

National Conference

1. Girish Bhola, Bhavana A. Rao, Prakruthi Harish, Shubhashree, **Ravish D.K.**, "Powered Exoskeleton for Lower Limb", National Conference on Recent Trends in Electrical, Instrumentation, Electronics and communication-2019(NCRTEIEC-2019), Dr. Ambedkar Institute of Technology, Bengaluru, Karnataka, India, pp.30, 7th and 8th June 2019.

2. Ravish D.K.,Subhash M.N., "Regression Analysis of Preoperative Pulmonary and Cardiac Function Results", First National Conference On Technology Innovation (NCTI-2018),pp.5 ISBN 978-93-86638-84-7.

3. Ravish D.K.,Sridhara C.,Ranjitha S., Pallavi S., Gowtham Raj, "EEG-Based Brain-Computer Interface: A Literature Survey", National Conference on Emerging Tecchnologies in Computer Science-2014 (NCETCS'14), Organised by Department of Computer Science & Engineering, J.N.T.U.K University College of Engineering Vizianagaram, Andrapradesh, on 28th and 29th March 2014.

4. Ravish D. K., Shanthi K. J., "Development of a Pure Tone Screener", National Symposium on Acoustics, Organised by All India Institute of Speech and Hearing Sciences, Mysore, India, pp. 17-23, 2014.

5. Shanthi K. J., **Ravish D.K.**, A P Manjunath, "Visual Text Aided System Of Sign Language Using Android OS Visual Text Aided System for Sign Language", National Symposium on Acoustics, Organised by All India Institute of Speech and Hearing Sciences, Mysore, pp. 11-16, 2014.

6. Ravish D.K. , Shenbaga Devi S., Karthikeyan M.R., "Detection of epileptic seizure in EEG by spectral method", National Conference on Embedded, Microwave and Integrated Technologies-EMIT-2011.Sponsored by Board of Research in Nuclear Sciences (BRNS) Council of Scientific and Industrial Research(CSIR), Saveetha Engineering College,Thandalam ,Tamilnadu, pp.56-62,2011.

5. Ravish D K, Umadevi H, Image Processing application in information retrieval from database, National Conference 2008, Organised by Dayanandsagar College of Engineering, Bangalore, and Karnataka.

6. Ravish D K, Mahesan V, Design and Development of a Micro Controller based segmental Blood flow meter, National Conference on NCVCOM-2008, Saintgits College of Engineering Kottayam, and Kerala.

7. Ravish D K, Shivashankar, Face recognition and Search System Using Image Processing, National Conference on VLSI and Communication 2007, Saintgits College of Engineering Kottayam, Kerala.

8. Ravish D K, Manjunatha A P, Spectral Analysis and Coherence Function Estimation during ECT, National Conference on Signal Processing and Communication 2006, Professional Activity (PAC), IETE, Jawaharalal Nehru College of Engineering, Shimogga. Karnataka.

Projects:

Completed

No.	Proposal No.	TITLE OF THE PROJECT	BRANCH	Sponsorship	Mailing Batch
30TH SERIES OF STUDENT PROJECTS PROGRAMME: 2006-2007 **LIST OF PROJECT PROPOSALS SANCTIONED FOR SPONSORSHIP**					
1.	30S726 Rs.3,500/-	Design and development of a cardiovascular monitoring system using ECG and stethoscope data	MEDICAL ELECTRONICS	KSCST	B
36th SERIES OF STUDENT PROJECTS PROGRAMME: 2012-2013					
2.	36S0959 Rs.6,000/-	Real time heart function Monitoring, assessment And prediction of heart Attacks and its preventive Measures	MEDICAL ELECTRONICS ENGINEERING	KSCST	A

In house Project

Title of the Project	Agency Sponsored			Date		Status of the Faculty
	Dr.AIT	Govt	Others	Initiation	Completion	
Real Time Biomedical Signal Acquisition And Analysis Based On Wireless	No. Ref. AIT/ ML/ 318 / 18-03-2013/2013 -14 Sanctioned	-	-	18-03-2013	2014	Principal investigator Utilized (Rs.22,813/- fund and completed)

Communication For Cost Effective Patient Monitoring In Primary Health Centres	PVP Welfare Trust, Dr.AIT, B'lore-56.					

Title of the ATAL Programme : Electrophysiology and Neuro-Instrumentation" during 8th-12th November 2021

Sl. No.	AICTE Sanction Order/LetterNo. & Date under which grant was sanctioned	Amount (Rs.)	
1.	e-Mail from AICTE South-West Region <swro@aicte-india.org> Oct 13, 2021, 4:28 PM, Accounts section, AICTE SWRO BENGALURU.	Rs.93,000/-	Certified that out of the grant-in-aid of Rs. 93,000/- (Ninety-three thousand only) sanctioned by the AICTE during the financial year 2021-2022 in favour of (Dr. Ambedkar Istitute of Technology, Bangalore-560056) as per letter mentioned in the margin, Rs. on account of unspent balance of previous year, Rs. 93,000/- on account of other income / receipts, a sum of Rs. has been utilized for the purpose for which it was sanctioned and the balance of Rs. 0/- remained unutilized at the end of the year.

Ongoing

Title of the Project	Sponsorer			Date		Status of the Faculty
	Dr.AIT	Govt	Others	Initiation	Completion	
Implementation of IOT driven Medical Devices for Telemedicine Applications	No. Ref. AIT/ ML/ 451/ 13-02-2024 Sanctioned PVP Welfare Trust, Dr.AIT, B'lore-56.	-	-	18-03-2023	2025	Sanctioned Amount Rs. 50,000/-

Special Lecture/ Invited Talks Delivered

Sl. No.	Title of the Talk	Date and Place of the Talk	Organization By	Type of Programme
1.	Advances in Medical Signal and Image Processing	07-05-2018 Department of Biomedical Engineering and Centre for Health Technologies SSN College of Engineering, Kalavakkam-603110, TN.	SSN College of Engineering Kalavakkam-603110, TN.	Five days (FDP) Faculty Development Programme
2.	Advanced Recent Trends in Speech and Image Processing	23-01-2019 Department of Electronics & Communications Engineering MVJ College of Engineering, Bangalore-560067.	MVJ College of Engineering, Bangalore-560067.	Five days (FDP) Faculty Development Programme
3.	Fast Convolution using Overlap add & Save method on EE8591 Digital Signal Processing	FDP Workshop From 10.06.2019 to 15.062019	12.06.2019 SRM Valliammai Engineering College, SRM Nagar, Kattakulathur- 603203, TN	Five days (FDP) Faculty Development Programme
4.	Wavelet transforms for Medical Signals 5-day FDP on "Biomedical Instrumentation and Signal Processing"	06th to 10th January 2020	07-01-2020 Department of Electronics AND Communication Engineering, T.K.M. College of Engineering, Kollam- 691005, Kerala	5-day Faculty Development Program on "Biomedical Instrumentation and Signal Processing
5	Neural network in Bio Signal Processing CSIR Sponsored National Seminar on "Effective Heart Disease Detection based on Quantitative Machine Learning Technique"	13th March 2020	Muthayammal Engineering College, Rasipuram-637408 Namakkal Dt., TN.	CSIR Sponsored CSIR Sponsored National Seminar on "Effective Heart Disease Detection based on

				Quantitative Machine Learning Technique"
6	Advanced Physiological Signal Processing and Modelling for Neural networks	A National Level Webinar	Dr.MGR Educational and Research Institute Faculty of Engineering Technology, Department of EEE/ECE Madhuravoyal, Chennai-600095 Tamilnadu 25th June 2020	National Level
7	Bio signal processing using Neural Network	Webinar Muthayammal Engineering College, Rasipuram-637408 Namakkal Dt. Tamilnadu 23rd May 2020	Organized by Muthayammal Engineering College, Rasipuram-637408 Namakkal Dt. Tamilnadu	National Level
8	Introduction to Electrophysiology & Bioinstrumentation	Webinar Arasu Engineering College, Kumbakonam, Thanjavur	Organized by Department of ECE-BME Arasu Engineering College, Kumbakonam, Thanjavur District, Tamilnadu 5th October 2020	National
9.	BMI Unit-1 Fundamentals of Biomedical Engineering	Five days (FDP) Faculty Development Programme -Fundamentals of Biomedical Engineering Program between 30.11.2020 to 05.12.2020	04.12.2020 Department of Electronics and Instrumentation Engineering SRM Valliammai Engineering College, SRM Nagar, Kattakulathur- 603203, TN	National
10.	Recent Trends in Electrophysiology and	Recent trends in Five day (FDP) Faculty Development	Vel Tech Rangarajan Dr. Sakunthala R&D Institute of Science and	National

	Bioinstrumentation	programme- Biomedical Engineering 07.01.2021 to 12.01.2021	Technology, Vel Nagar, Chennai, Tamil Nadu 600062	
11.	Implementation of Integrated Learning Approach in Biomedical Measurement and Instrumentation	Guest Lecture 07.01.2021	Department of Medical Electronics, Sri Siddartha Institute of Technology, Tumkur-572105.	National
12.	An Integrated Approach on Biomedical Engineering	Recent trends in Five day (FDP) Faculty Development programme 6th October 2021	Konganadu College of engineering technology, Tholurpatti -621215 Thottiam, Trichy, Tamilnadu	National
13.	Recent advances in Medical Image Processing and Hands on MATLAB	Thrust area: Recent advances in Medical Image Processing and Hands on MATLAB Theme: Innovation Activity Name: Student Chapter Elsoc Target audience: Student and Faculty August 24th, 2023	Department of Electronics and Communication Engineering, BMS College of Engineering, Bengaluru- 560 019	National
14.	Innovativeness in Project Ideation and Start-ups	Inspiring session Target audience: Student and Faculty Programme on 28.08.2023	Department of Electronics and Communication Engineering, Muthyalammal College of Engineering, Rasipuram, Namakkal District, Tamilnadu.	National
15.	From Data to Discovery: MATLAB Skills for Faculty Researchers-Data Visualization and Machine Learning	Organizing National Level Five Days Faculty Development Programme on 5th Dec 2023, Tuesday	The Department of Computer Science and Engineering, Nitte Meenakshi Institute of Technology, Yelahanka, Bangalore -560064	National