



**NAME :** Ms. PUSHPA B

**CAMPUS:** Department of Biomedical Engineering, Ramapuram, Chennai.

**EXPERIENCE :** 11.6 years of experience

**RESEARCH INTEREST**

Medical Image processing, Biosignal Processing, Machine learning and deep learning techniques and Health Services Management

**No of PG projects guided:** 3

**COURSES**

**UG**

- Biomedical signal processing
- Medical Image Processing
- Signals and systems
- Digital signal processing
- Biomedical Instrumentation
- Medical Electronic devices
- Neural Network and Fuzzy Logic
- Control System
- Measurements and Instrumentation

**PG**

- Applied Soft Computing
- Biomedical signal analysis

**EDUCATION**

Degree	Specialization	Name of the Institution	Year of passing
(PhD)	Electrical and Electronics	Annamalai University	Thesis Submitted
MBA	Health Service Management	Anna University	2023
M.Tech	Electronics and control	SRM University, Kattankulathur, Chennai	2010
B.E	Electronics and Instrumentation	St. Peter's Engineering College, Avadi, Anna University	2007

**SCI INDEXED / SCOPUS INDEXED / JOURNALS**

1. **Pushpa B**, Basakaran B and Vivekandan s “Liver fat analysis using optimized support vector machine with support vector regression” in Technology and Health Care DOI: 10.3233/THC-220254. (Impact Factor :1.204)
2. **Pushpa B**, Basakaran B and Vivekandan s “Liver Segmentation using M-net for Cirrhosis” in Measurement Sensors Elsevier publications.
3. Saranya, Shri Vindhya, **Pushpa B** “E-Blood Bank Application using GPS and Cloud Computing” ‘International Journal of Engineering and Advanced Technology, ISSN:

2249-8958 (Online), Volume-9, Issue-2, December 2019, Page No- 3246-3249.  
Impact Factor - 5.97

4. **B.Pushpa**, and Dinesh Nayak “Detection of Startle Type Epilepsy using Machine Learning Technique” International Journal of epilepsy, DOI: 10.1055/s-0039-1693072, ISSN 2213-6320. Elsevier publications (Impact Factor :0.14)
5. **B.Pushpa**, D.Najumnissa and Dinesh Nayak “ Correlation Analysis and Modeling of EEG – EMG Signal for Startle-Induced Seizures,” OnLine Journal of Biological Sciences, DOI: 10.3844/ojbsci.2017. Science Publications; (SJR :0.14)

#### **PATENTS:**

1. A patent is published titled “Intelligent estimation of liver fat and its stages by using DICOM” claim no. 202241010150 pg.no. 14420
2. A patent is published titled “Machine learning based approach to segment the images captured using various modalities” Claim no. 202241001805

#### **ACADEMIC EXPERIENCE**

- Working as an Assistant Professor (O.G), in the Department of Biomedical Engineering, SRMIST from 26<sup>th</sup> June 2023 to till date.
- Assistant Professor (O.G), Electronics and Communication Engineering Department, Kings Engineering College, Oct 2021- June 2023.
- Assistant Professor (O.G), Biomedical Engineering Department, Saveetha Institute of Medical Science and Technology (formerly known as Saveetha University), Sriperumbadur, 2019-2020.
- Assistant Professor (O.G), Electronics and Instrumentation Engineering Department, BS Abdur Rahman Institute of Science and Technology, Vandular, 2012-2019.
- Assistant Professor (O.G), Electronics and Communication Engineering Department, Velammal Institute of Technology, Panchetti. 2011-2012.
- Lecturer, Electronics and Communication Engineering Department, SMK Forma Institute of Science and Technology, Chennai 2010-2011.

#### **OTHER PROFESSIONAL EXPERIENCE**

1. Under Nan Mudhalvan Scheme of Anna university attended the training Program in “Robotics Simulation for Manufacturing” for a period of September 2022
2. A one month Internship training program attended in EEG at Fortis Malar Hospital Adyar, Chennai.
3. Worked as a role of assistant professor cum research faculty coordinator in R&D from June 2017 to June 2019 at B.S Abdur Rahman Crescent Institute of technology.
4. A study project of “Detection of Startle Type Epilepsy using Machine Learning Technique” was done in Global Medical Hospital, Chennai

#### **INTERNATIONAL / NATIONAL CONFERENCE**

1. Najumnissa. D, Mohammed Khalid S.J, Pushpa. B, Arunkumar. S, “Design of Heart rate Data Acquisition system with mobile alert on emergent data using Labview,” International Conference on Modern Applications in Engineering & Technology – 2017 (IER-MAET’17), March 2017. <http://ijarmet.vtpree.com/special-issue-march-2017>.
2. B.Pushpa, D.Najumnissa, and C.Tharini “A Study of EEG–EMG feature Correlation for Startle type Epileptic Seizures” is published in IWSP7: EPILEPSY MECHANISMS, MODELS, PREDICTION & CONTROL” during 3-6 August 2015,

and organized by the Department of Electrical & Electronic Engineering, The University of Melbourne, Parkville VIC 3010, Australia.

3. B.Pushpa and D.Najumnissa, "Classification of Epileptic Seizure EEG signals using EMD & ANFIS" on 21st and 22nd May 2014 at International Conference on Informatics, Electronics & Vision (ICIEV '14), University of Dhaka, Bangladesh.
4. D.Najumnissa, B.Pushpa and Syed Rafiammal, "Feature Selection and Detection of Epileptic Seizure EEG Signals using EMD and PSO," at the International Conference on International Conference on Recent Advances in Engineering, Science & Technology – ICON'15" organized by Noorul Islam University on 17th April,2015.
5. Aparna, B.Pushpa and D.Najumnissa, "Application of chaos theory and SVM to seizure detection of epilepsy" National Conference on Trends in Instrumentation &Automation on April 2015 at Velammal Engineering college, Chennai.
6. Archana, B.Pushpa and D.Najumnissa, "Application of surface electromyography in assessing the muscle movement pattern using wavelet packet entropy" National Conference on Trends in Instrumentation &Automation on April 2015 at Velammal Engineering college, Chennai.
7. B.Pushpa and D.Najumnissa, "Characteristic Of Epileptic Seizure Using Empirical Mode Decomposition And Support Vector Machine" Present Scenario and Future Trends in Biomedical Engineering and Healthcare Technologies on November 2014 at School of Biomedical Engineering, IIT (BHU), Varanasi.
8. B.Pushpa and D.Najumnissa, "Application of Empirical mode decomposition to epileptic seizure EEG signals" National Conference "Recent Trends in Instrumentation control and Automation", at Sairam Engg. College, Chennai on March 2014.
9. Najumnissa Jamal D, Pushpa B, Rangaswamy T R "Detection and classification of seizures using feature extrication and particle swarm optimization neural network" National Conference on DRDO Sponsered Control Instrumentation System organized by Manipal University.
10. B. Pushpa and D.Najumnissa Jamal, "Classification of ECG signals using Support Vector Machine", National Conference on Communication Network and Sensor Technology, organized by Hindustan Institute of Technology and Science, Chennai, 11thApril 2013.
11. Pushpa B, Nageswari M.P. and Najumnissa Jamal D "A study on piezoelectric MEMS vibration energy harvesters for power management" National Conference on Control, Communication and system Engineering, organized by Tamilnadu College of Engineering

## **FACULTY DEVELOPMENT PROGRAM**

1. A Faculty Training Program conducted by AICTE Training And Learning (ATAL) Academy Online Elementary FDP "Technological Innovation of Artificial Intelligence in Medical Diagnostics" at Shri Shankaracharya Technical Campus Bhilai from 6.12.2021 to 10.12.2021.
2. A Faculty Training Program conducted by AICTE Training And Learning (ATAL) Academy Online Elementary FDP on "Deep Learning" from 13/12/2021 to 17/12/2021 at Indian Institute of Information Technology Vadodara.

3. A Faculty Training Program conducted by AICTE Training And Learning (ATAL) Academy Online Elementary FDP on "Data Analysis using Python" from 27/12/2021 to 31/12/2021 at IPS Academy, Institute of Engineering & Science.

### **WORKSHOPS ORGANIZED**

- A workshop is organized along with scarf (Schizophrenia Research Foundation) for doctors titled “Data Analysis and Visualization Using R” on and it is sponsored by SCARF and conducted on 14.03.2019.
- Two days R-Program was organized and given seminar for benefits of our research scholar in month of October 2018 and November 2018.
- A Faculty Training Program on “NANO INSTRUMENTATION SYSTEMS AND BIOMEDICAL NANOTECHNOLOGY” for benefit of Research Scholars, Faculty Members and Industry Person from 3.11.2017 to 16.11.2017.
- A one day a national level project display titled, Vision and growth strategies – an Innovative project display on 18.4.17 under the IEEE banner.

### **MEMBERSHIPS**

- Reviewer- Journal of Medical Imaging-SPIE
- Reviewer – Biomedical Signal Processing and Control- Elsevier
- Reviewer – Journal of advances in Signal Processing
- Reviewer- IEIE Transactions on Smart Processing and Computing
- IFERP – Member
- Reviewer - Taylor & Francis Online
- Membership in London Journal of Research in Science: Natural and Formal

### **RESPONSIBILITIES HELD**

- Event coordinator of the department
- Research coordinator of the department
- Campus Life coordinator of the department
- Technical Club and Non-technical Club - Coordinator
- Biosensor lab Incharge
- Department Library In charge
- Purchase Incharge
- Freshers Day – Supporting Faculty