SCHOOL OF ELECTRICAL AND COMMUNICATION
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Centre Name : **Centre for Biomedical Signal Processing** **Venue** : **29005**
Centre Head : **Dr. A. Bakiya** **Qualification** : **M.E., Ph.D.,**

DESCRIPTION ABOUT THE LABORATORY

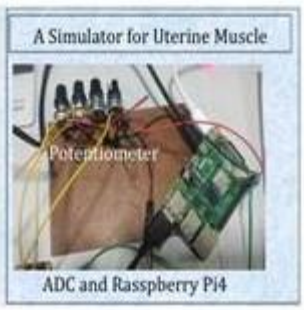
Centre for Biomedical Signal Processing is focused on the electrophysiological signal acquisition (EMG, EOG and EGG) and processing of those signals using artificial intelligence. Additionally, the centre employed fractional calculus methods to optimize the artificial neural network for efficient analysis of Electrophysiological signals. Further, the centre utilizes the various image processing techniques for analysis of biomedical images.

Currently, ANRF-TARE project entitled as Development of Efficient Swarm Intelligence Based Optimization Algorithm Using Fractional Calculus for Diagnosis of Muscle Disorders. Our centre has been equipped with single channel electrophysiological acquisition device with 3 types of sensors (EMG, EOG, EGG). Our Centre consists of 1 principal investigator, 1 Research Scholar and 9 undergraduate students for minor/major project.

RESEARCH FACILITIES

Data Acquisition Device

Developed Prototype



LABORATORY SPACE AND STUDENT ALLOCATION

Area of the Laboratory : 60sq.m
Weekly Utilization Status : Open Access for Research & Development Activities

COST OF THE LABORATORY

ANRF-TARE funded worth of Rs. 18, 30,000/-

COLLABRATIONS

Prof. V. Vetrivel, Department of Mathematics, Indian Institute of Technology Madras, Chennai, India.

ACHEIVEMENTS AND AWARDS

- Published 1 patent, 3 peer-reviewed articles in SCI-indexed journals and presented at 7 international conferences.
- Received ANRF-TARE Fellowship **Rs. 60,000/-** for three years (2022-2025).

SPONSORED PROJECT

Title	Agency	Amount (₹)	Duration
Development of Efficient Swarm Intelligence Based Optimization Algorithm Using Fractional Calculus for Diagnosis of Muscle Disorder	ANRF-TARE	18.30 L	2022-2026 3 Years 5 Months (on-going)