ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ
("ವಿ ಟಿ ಯು ಅಧಿನಿಯಮ ೧೯೯೪" ರ ಅಡಿಯಲ್ಲಿ ಕರ್ನಾಟಕ ಸರ್ಕಾರದಿಂದ ಸ್ಥಾಪಿತವಾದ ರಾಜ್ಯ ವಿಶ್ವವಿದ್ಯಾಲಯ)
Visvesvaraya Technological University
(State University of Government of Karnataka Established as per the VTU Act, 1994)
"Jnana Sangama" Belagavi-590018, Karnataka, India

Dr. Prasad B. Rampure, M.E., Ph.D.
Registrar

Phone: (0831) 2405468
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Ref. No.: VTU/MYS/CDOE/2025-26/331 Date: 18.02.2026

CIRCULAR

Sub: Three Days Workshop on training in EEG and fNIRS Neurophysiological Monitoring Devices - reg

Ref. Hon'ble Vice Chancellor approval vide Para No.: 04 dated: 12.02.2026

VTU Centre for Brain Research (VTU-CBR), Mysuru is organizing three days workshop on "Training in EEG and fNIRS Neurophysiological Monitoring Devices", scheduled from 26th to 28th February 2026 at VTU Centre for Brain Research, Regional Centre, Hanchya Sathagalli Layout, Ring Road, Mysuru. The workshop is organized in collaboration with ITIE Knowledge Solutions, Bengaluru. The programme aims to provide basic knowledge and hands-on training in EEG and fNIRS systems, including brain signal recording, data acquisition, and analysis. Participants will gain practical exposure to neurophysiological monitoring devices and their applications in biomedical research, cognitive science, and related fields.

This workshop is cordially extended to the VTU research scholars and faculty members in biomedical and related domains. The detailed scheduled with the topics covered in this workshop are briefed in the enclosed brochure. The research scholars and faculty members are kindly requested to register for the workshop by filling out the Google form at the earliest on or before **25th February 2026.**

Registration Link: https://forms.gle/E7eUhsn2ur41juhW9

Note: There is no registration fee and participation is limited to 50.

The Principals of all affiliated, autonomous & constituent colleges and the PG Coordinators, VTU CPGS are hereby requested to bring it to the notice to all research scholars of VTU and faculty members of concern departments to make use of this opportunity without fail.

Enclosure: Workshop Brochure

By Order,

Paul/18/02/26

Registrar

To,

1. The Principals of all affiliated/ constituent/ autonomous engineering colleges/ The PG Coordinator VTU CPGS of VTU - for kind information and needful.

Copy to:

1. The Hon'ble Vice Chancellor, VTU, Belagavi through Secretary to VC for kind information.
2. The Registrar, VTU, Belagavi – for kind information.
3. The Registrar (Evaluation), VTU, Belagavi – for kind information.
4. The Regional Directors, VTU, ROs, (Bengaluru, Mysuru, Kalaburagi and Belagavi) for information and circulate among the respective region colleges for necessary action.
5. The Regional Director, VTU, Regional Office, Mysuru – for kind information and do the needful.
6. The Special Officer, CNC, VTU, Belagavi for information and to upload on website.
7. Office file.

ABOUT VTU CENTRE FOR BRAIN RESEARCH

The VTU Centre for Brain Research has been established very recently with the objective of advancing interdisciplinary research in neuroscience, biomedical engineering, cognitive technologies, and human–machine interaction. The Centre is equipped with modern biomedical systems including wearable EEG headbands, research-grade EEG headsets, Brain–Computer Interface (BCI) devices, and fNIRs hemodynamic imaging systems. In order to make these advanced facilities accessible to all research scholars across VTU, this three-day professional workshop is being organised. The programme aims to provide structured training, hands-on exposure, and technical competency that will enable scholars from various research domains to effectively utilize the Centre's equipment for their ongoing and future research work.

Objectives of the Workshop:

1. Develop practical skills in EEG and fNIRS data acquisition and analysis
2. Introduce participants to clinical-grade neurodiagnostic tools
3. Build competency in ERP paradigms, spectral analysis, and source localization
4. Train scholars in multimodal neurophysiological recording and synchronization
5. Support research advancement in cognitive neuroscience, biomedical engineering, and AI

Expected Outcomes:

1. Ability to independently operate EEG and fNIRS systems
2. Conduct resting-state, ERP, and cognitive task recordings
3. Perform preprocessing and analysis of EEG data
4. Apply sLORETA for functional brain source localization
5. Utilize multimodal EEG–fNIRS systems for advanced research
6. Integrate acquired skills into thesis work and publications

- This programme is exclusively designed for VTU Research Scholars, who are working in the Biomedical Domain.
- The maximum number of participants allowed is 50 (first 50 Research Scholars registered through Google Form).
- Softcopy of the study materials will be provided to the participants during the workshop.
- Soft copy of the certificates will be issued to the participants based on their attendance.
- Accommodation will be provided for outstation participants. Prior intimation is required.
- All the participants shall have a personal laptop with them.

No Registration Charges

Registration Link
https://forms.gle/E7eUhsn2ur41juhW9

CONTACT US

Email Address
vtucbrmysuru@gmail.com

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI
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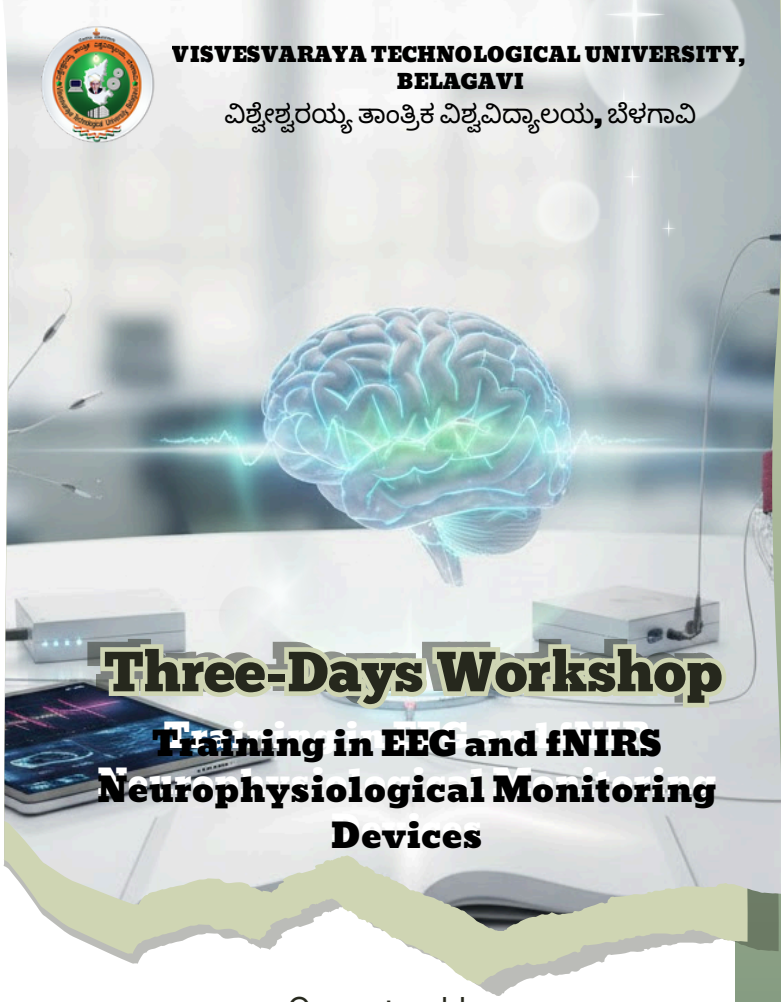

Three-Days Workshop

Training in EEG and fNIRS Neurophysiological Monitoring Devices

Organized by
VTU-CBR (Centre for Brain Research)
in Collaboration with
ITIE Knowledge Solutions Bangalore

February 26th -28th 2026

VTU's Centre for Brain Research (VTU-CBR),
2nd floor. Training Block, Regional Centre,
Hanchya, Sathagalli Layout, Mysuru, Karnataka

TRAINING IN EEG & FNIRS NEUROPHYSIOLOGICAL MONITORING DEVICES
THREE-DAYS WORKSHOP PROGRAMME SCHEDULE

DAY 1 : 26 FEB 2026, THURSDAY

FOUNDATIONS OF BRAIN SIGNALS + WEARABLE EEG SYSTEMS

SPEAKER:
Dr. Sanjeev Kubakaddi

Session	Time	Topics covered
Session 1: ***Title: Contextual Understanding of EEG Signals. Neurotechnology Applications and opportunities for the future workforce.***	10:00 AM – 12:00PM	·Understanding of the functions of time and space in signals. ·Overviewof Neurotechnology, applications in cognitive sciences, AI, human-machine interaction. ·Wearable brain monitoring technologies (EEG, fNIRs) in real-world applications.
Session 2: EEG Fundamentals & Device Ecosystem Overview (ITIE) Demonstration: Wearable EEG Headband Demonstration (ITIE)	12:15PM – 01:00PM	·Components of EEG systems: electrodes, amplifiers, software ·Electrode types (dry, semi-dry, gel-based) ·Sampling rate, resolution, filtering basics ·Montages: referential, bipolar ·Impedance & signal quality considerations ·Overview and comparison of workshop devices: EEG Headband (wearable neuro-wellness device) EEG Headset (research-grade mid-channel)
		·Device components & correct sensor placement ·Wireless/Bluetooth setup ·Running recordings: Eyes open vs eyes closed (alpha response demonstration) Attention-focused tasks ·Viewing real-time EEG traces ·Basic troubleshooting & managing connectivity issues
1:00 PM – 2:00 PM — LUNCH BREAK		
Session 3 (Hands-On): Live EEG Data Acquisition Using Headband and Headphone Systems	2:00 PM – 3:30 PM	·Multi-channel positioning basics ·Impedance checking & optimization ·Real-time signal visualization & quality comparison with headband Data saving & exporting workflow

DAY 2: 27 FEB 2026, FRIDAY

CLINICAL-GRADE EEG (MITSAR) + SLORETA SOURCE LOCALIZATION

SPEAKERS:
ITIE Team

Session	Time	Topics covered
Session 1: Advanced EEG Concepts & Signal Analysis (ITIE)	10:00 AM – 10:30 AM	·10–20 electrode placement in detail ·Cortical mapping & electrode naming scheme ·High-density EEG principles ·Power Spectral Density (PSD) ·Introduction to Event-Related Potentials: P300, N200, MMN ·Time-domain vs frequency-domain EEG ·Clinical vs research EEG differences
Session 2: MITSAR EEG System — Hardware, Software & Workflow	10:30 AM – 11:15 AM	·Overview of MITSAR amplifier & accessories ·Clinical-grade sampling, resolution & filtering ·Software interface walkthrough ·Settings for resting-state & ERP recordings ·Safety, hygiene, and participant prep guidelines
Session 3 (Hands-On): Full 10–20 Setup & Impedance Optimization. Session 4(Hands-on): MITSAR Recording Protocols	11:30 AM – 01:00 PM	·Measuring head circumference (locating Cz) ·Step-by-step electrode placement ·Managing electrode impedance ·Stabilizing baseline signals before recording
		·Recording resting-state EEG ·Eyes-open / eyes-closed comparisons ·Relaxation vs activation paradigms ·ERP Oddball task: stimulus presentation, event marking ·Real-time raw EEG & ERP visualization ·Artifact identification during acquisition Saving datasets for offline analysis
1:00 PM – 2:00 PM — LUNCH BREAK		
Session 5: EEG Data Analysis + sLORETA Functional Source Imaging	2:00 PM – 3:30 PM	A.EEG Preprocessing & ERP Analysis ·Applying filters (0.5–30 Hz typical) ·Noise/artifact reduction concepts ·Band power mapping (delta → gamma) B. Introduction to sLORETA (Standardized Low-Resolution Electromagnetic Tomography) C. Exporting Data to MATLAB, EEGLAB &sLORETA Software ·File formats & compatibility ·Basic walkthrough of sLORETA interface

DAY 3: 28 FEB 2026, SATURDAY

BIOMEDICAL RESEARCH AND FNIR SYSTEMS

SPEAKER:
Dr. P Sandhya

Session	Time	Topics covered
Session 1: Introduction to Biomedical Research	10:00 AM – 10:30 AM	·Fundamentals of Biomedical Research ·Role of Neurophysiological Signals in Research ·Research Methodology and Ethical Considerations
Session 2: Fundamentals of fNIRS Neuroimaging	10:30 AM – 11:15 AM	·Principles of optical neuroimaging ·Hemodynamic response: HbO, HbR ·Optodes, sources, detectors, spacing ·Temporal vs spatial resolution ·Motion artifacts & strategies to reduce them ·When to choose fNIRvs EEG
Session 3: fNIRS Applications in Cognitive & Clinical Studies	11:30 AM – 12:15 PM	·Cognitive workload & attention ·Working memory paradigms ·Stress and emotional assessment ·Motor activation mapping ·Clinical applications: stroke rehab, ADHD, geriatrics Best practices & limitations
Session 4 (Hands-On): fNIRS Setup & Calibration	12:15 PM – 01:00 PM	·Proper optode placement ·Ensuring adequate optical contact ·Checking LED/laser intensity ·Real-time signal monitoring ·Troubleshooting poor optical signal
1:00 PM – 2:00 PM — LUNCH BREAK		
Session 5(Hands-On): Cognitive Task Recording with fNIRS	02:00 PM – 03:30 PM	·Task selection for hemodynamic activation ·N-back, Stroop, Motor tapping ·Recording HbO/HbR changes ·Interpreting typical activation waveforms Exporting data for offline analysis

For more information, please drop us an email at: vtucbrmysuru@gmail.com