

## **TWO DAYS WORKSHOP ON**

# **“BRAIN COMPUTER INTERFACE (BCI) : SIGNALS AND APPLICATIONS”**

**8th and 9th February 2019**

### **Coordinators**

**Dr. S.Shenbaga Devi, Professor  
Dr.N.Kumaravel, Professor-Emeritus  
Dr.S.Nirmala Devi, Professor**

### **Organized by**



**Centre for Medical Electronics  
Department of ECE.  
CEG Campus, Anna University  
Chennai-600 025.**

### **ABOUT ANNA UNIVERSITY**

Anna University was established on 4th September, 1978 as a unitary type of University. It provides higher education in Engineering, Technology and Allied Sciences significant to the current and expected needs of the society. It has an extensive link with Indian industries, national research laboratories, and international universities. This enables the university to continue with new development and emerging technologies.

### **ABOUT THE CENTRE**

Centre for Medical Electronics was established in the year 1998. Its main goal is to create and nurture qualified technical manpower towards academic excellence, research and development attitude and competence. The centre carries out research in the field of Medical Electronics and Bio Medical Engineering and also establishes collaboration with medical industries and hospitals. It is functioning with an aim of developing research and development activities in Medical Electronics and Bio Medical Engineering.

### **OBJECTIVE**

The objective of this workshop is to provide opportunity for Bio Medical engineers, Researchers and Faculty members to enrich their knowledge in the area of Brain Computer Interface and its applications. This workshop will focus on the acquisition and analysis of bio signals suitable for Brain Computer Interface applications .

### **HIGHLIGHTS OF THE WORKSHOP**

Brain Computer Interface is an interdisciplinary field which develops computational and mathematical methods for analyzing the brain functions during specific activities of the brain. This helps to establish communication between the brain function and an external device. Hence the main goal of BCI is the acquisition of brain related signals and processing them, mainly for rehabilitation applications. The workshop will provide brief insights on the following:

- Signal acquisition and pre processing
- Pattern recognition and classification of the BCI signal for deriving control signal
- BCI Applications and Case studies
- Practical session on brain signal acquisition

**CHIEF PATRON:**

**Dr.M.K.Surappa**  
**Vice Chancellor**  
**Anna University**  
**Chennai – 600 025**

**PATRON:**

**Dr.J.Kumar**  
**Registrar**  
**Anna University**  
**Chennai-600 025**

**CHAIR:**

**Dr.S.Shenbaga Devi**  
**Director**  
**Centre for Medical Electronics**

**CO-ORDINATORS:**

**Dr. S.Shenbaga Devi**  
**Professor and Director**  
**Centre for Medical Electronics**

**Dr.N.Kumaravel**  
**Professor – Emeritus**  
**Dept. of ECE**

**Dr.S.Nirmala Devi**  
**Professor**  
**Centre for Medical Electronics**

**VENUE:**

**College of Engineering**  
**Guindy, Anna University,**  
**Chennai-600 025**

**REGISTRATION FEE & DETAILS**

**Industry Delegates - Rs 2500 /-**  
**Academic/Research - Rs.2000/-**  
**Students - Rs.1500/-**

The registration form in the prescribed format should reach the address for communication mentioned below not later than 28th January 2019. Since the number of participants is limited, the selection will be on first come first serve basis. The applications without DD will not be entertained.

The registration fees can be paid through Demand Draft in favor of

**“Organized Programmes,**  
**Anna University, Chennai”**

**IMPORTANT DATES:**

**Last date for Submission of**  
**Application : 28.01.2019**  
**Intimation of Selection : 31.01.2019**  
**Confirmation by participants :02.02.2019**

**Address for Communication:**

**Workshop on “Brain Computer Interface**  
**(BCI) : Signals and Applications”**  
**Centre for Medical Electronics,**  
**Department of ECE,**  
**College of Engineering Guindy,**  
**Anna University,**  
**Chennai- 600025.**  
**E-mail:**

**s\_s\_devi@annauniv.edu**

**NO ACCOMMODATION WILL BE**  
**PROVIDED**

**REGISTRATION FORM**

**Name :**  
**Designation :**  
**Specialization :**  
**Areas of research :**  
**Department :**  
**College/organization :**  
**Address :**  
**Phone No. :**  
**E-mail :**  
**DD Details**  
**Amount :**  
**DD No. & date :**  
**Bank Name :**

**DECLARATION**

The above information is true to the best of my knowledge. I agree to abide by the rules and regulations governing the Workshop of the Anna University. If selected, I shall attend the programme for the entire duration. I also undertake the responsibility to inform the coordinator in advance in case I am unable to attend the workshop.

**Date: Signature of applicant**

**Place:**

**Signature of the HOD/Principal with seal**



**CENTRE FOR MEDICAL ELECTRONICS**  
**COLLEGE OF ENGINEERING, GUINDY**  
**ANNAUNIVERSITY, CHENNAI - 600 025.**

Ref: CME/Workshop/BCISA/2018

Date: 03.12.2018

**NOTE SUBMITTED TO THE HONOURABLE VICE CHANCELLOR**

Sub: Two days Workshop on 'Brain Computer Interface (BCI): Signals and Applications' on 8th and 9th February 2019. - Approval - Requested - Reg.

It is brought to the kind attention of the Honorable Vice Chancellor that two days Workshop on 'Brain Computer Interface (BCI): Signals and Applications' is proposed to be organized by the Centre for Medical Electronics at Mini Auditorium, Department of ECE, Anna University Chennai, on 8th and 9th February 2019 and Professor Dr. S. Shenbaga Devi, Dr. N. Kumaravel and Dr. S. Nirmala Devi will be the coordinators of the workshop.

The workshop is intended to provide opportunity for Biomedical engineers, Researchers and Faculty members to enrich their knowledge in the area of Brain Computer Interface and its applications. This workshop will focus on the acquisition and analysis of bio signals suitable for Brain Computer Interface applications. It also provides platform for the exchange of ideas among clinicians, Biomedical Engineers and scientists from Hospital, academic, research organizations and Industries to promote and accelerate the techniques involved in BCI applications. The expected number of participants is 50-60.

The budget proposed for the workshop is as follows

S.No	Item	Amount in (Rs)
1.	Honorarium i) Lecture @ Rs 1500 per session* ii) Practical @ Rs.1000 per session* per expert x 2 experts (*session = 1 hour and 30 minutes)	14000
2.	Travel allowance for the experts	10000
3.	Food(Lunch/tea/snacks)	25000
4.	Hospitality	4000
5.	Consumables (ICs, Electronic components, Stationeries, Posters, Brochure, Certificates etc)	12000
6.	Contingencies	10000
	<b>Total Expected expenditure</b>	<b>75000</b>



The registration fee proposed is given below

Industry delegates	: Rs 2500/-
Faculty /Research Scholars	: Rs 2000/-
Students	: Rs.1500/-

It is planned to meet the expenses from the registration fee amount and the additional expenses will be met from the budget allotted for "Centre for Medical Electronics"

~~Sub head: 'Consumables/Contingencies/Hospitality/Telephones'~~

*Shenbagan*

~~Sub head: 'Conduct of Workshops/Seminars'~~

It is submitted to the Honorable Convener Committee for the approval of the following:

1. To permit the Coordinator, Centre for Medical Electronics to conduct the Two days Workshop on "Brain Computer Interface (BCI): Signals and Applications" on 8th and 9th February 2019 in Anna University and to collect the registration fee in favour of "Organized Programmes, Anna University, Chennai"
2. To incur expenditure as proposed and settle the accounts as per Anna University norms.

*Shenbagan*  
*Shun*

COORDINATORS  
CME

*Shenbagan*

DIRECTOR  
CME

*Princy*  
06/12/18

REGISTRAR

*All expenses to be met from registration fee and other source*

APPROVED / NOT APPROVED

*M. K. Srinivasan*  
VICE CHANCELLOR 10/12/18





**COLLEGE OF ENGINEERING GUINDY**  
**ANNA UNIVERSITY :: CHENNAI - 600 025.**



DEAN

Procs.No/0405/DEAN/STC/ CEG/2019

Dated:19.02.2019

Sub : DEAN - Conducted a Workshop on " Brain Computer Interface (BCI): Signals and Applications" during 8th and 9th, February 2019- Sanction - Reg.

Ref : Letter dated 12.02.2019 from The Coordinator, Centre for Medical Electronics, Department of Electronics and Communication Engineering, Anna University, Chennai - 600 025.

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A sum of Rs.30,000/- ( Rupees Thirty thousand only) received from the Coordinator, Centre for Medical Electronics, Department of Electronics and Communication Engineering, Anna University, Chennai - 600 025, towards the fees collected in connection with the Conducted a Workshop on " Workshop on " Brain Computer Interface (BCI): Signals and Applications" during 8th and 9th, February 2019 has been remitted into Canara Bank Account No: 8456101113997 on 13.02.2019. Now, The Coordinator, Centre for Medical Electronics, Department of Electronics and Communication Engineering, Anna University, Anna University, Chennai - 600 025. has requested to sanction the 60% of the total amount collected for the settlement of bills in connection with the conduct the above programme.

Accordingly, sanction is hereby accorded for a sum of Rs.18,000/- (Rupees Eighteen thousand only) being 60% of the total amount collected to The Coordinator, Centre for Medical Electronics, Department of Electronics and Communication Engineering, Anna University, Chennai - 600 025. for the conduct of above Training Programme.

The expenditure is debitable under the head of Account "Short Term Courses - 1. Operational Expenses.

To : The Coordinator,  
Centre for Medical Electronics,  
Department of Electronics and Communication Engineering,  
Anna University,  
Chennai - 600 025

DEAN, CEGC

Bill Passed for Rs. 18,000/-  
(Rupees Eighteen thousand  
Only.....  
.....  
.....

19/2/19