

**REGISTRATION FORM**  
CSIR SPONSORED  
NATIONAL LEVEL SEMINAR

ON

**“CONTRIBUTION OF MATHEMATICAL  
MODELS IN BIOMEDICAL IMAGING”**  
**14.05.2019**

1. Name :
  2. Designation :
  3. Academic Qualification :
  4. Department :
  5. Institution :
  6. Address :
  7. Mobile :
  8. E-mail ID :
  9. Accommodation Required : YES/NO
- Payment Details
10. DD No & Date :
  11. Amount :
  12. Bank & Branch :

**DECLARATION**

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

Date:

Place:

Signature of the Participant

**ORGANIZING COMMITTEE**

**CHIEF PATRON**

**Thiru. S. S. Kandasamy,**  
President, Vellalar Educational Trust.

**PATRON**

**Thiru. S. D. Chandrasekar,**  
Secretary, Vellalar Educational Trust.

**PRESIDENT**

**Dr. M. Jayaraman,** Principal,  
Velalar College of Engineering and Technology.

**VICE PRESIDENTS**

**Prof. L. Peter Stanley Bebington,**  
Dean (Academics).

**Prof. P. Jayachandar,**  
Dean (Student Affairs).

**CONVENER**

**Dr. S. Mangai,** Professor & Head/BME.

**COORDINATORS**

**Ms. M. Menagadevi,** Assistant Professor/ BME.

**Mr. S. Vigneshwaran,** Assistant Professor/ BME.

**SUBMISSION OF THE REGISTRATION  
FORM**

Candidates should mail the soft copy of registration form duly filled to **vcetcsir@gmail.com** on or **before 07.05.2019**

Submission of Application : 07.05.2019

Intimation of selection : 08.05.2019

Confirmation by Participation : 09.05.2019

**ADDRESS FOR COMMUNICATION**

**Dr. S. Mangai,**  
**Professor & Head,**  
**Department of Biomedical Engineering,**  
**Velalar College of Engineering and Technology,**  
**Thindal(po), Erode - 638 012, Tamil Nadu.**  
**Mobile no: 9942953419, 9600557356**



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Organized by

**DEPARTMENT OF BIOMEDICAL  
ENGINEERING**

(Accredited by NBA, New Delhi)

**VELALAR COLLEGE OF ENGINEERING  
AND TECHNOLOGY (Autonomous)**

(Accredited by NAAC with 'A' Grade)

Phone: 0424-2244201 to 204 and 206

Email: **vcetcsir@gmail.com**

Website: **www.velalarengg.ac.in**

Thindal(po), Erode - 638012, Tamil Nadu.

## **ABOUT THE INSTITUTION**

Velalar College of Engineering and Technology is a self-financing co-educational autonomous institution established in the year 2001 with all the necessary infrastructural facilities provided by Vellalar Educational Trust that ably governs the institution. The college is approved by AICTE, affiliated to Anna University, Chennai and accredited with 'A' Grade by NAAC. The BE/BTech programmes of BME, ECE, EEE, CSE, & IT have been accredited by NBA. The institution has completed 18 years of dedicated and excellent service in the field of technical education. The institution offers eight UG Programme (BME, Civil Engg., CSE, ECE, EEE, IT, Mech. Engg & Medical Electronics) and six PG (M.E - CSE, Embedded System Technologies, Applied Electronics, VLSI Design, MBA & MCA) programmes. There are six Anna University approved research centers in the departments of ECE, EEE, CSE, Management Studies, Physics and Chemistry.

## **ABOUT THE DEPARTMENT**

The Department of Biomedical Engineering was established in the year 2005 with undergraduate programme in Biomedical Engineering.

The Department is well equipped with laboratories such as Biochemistry Lab, Physiology Lab, Pathology Lab, Diagnostic and Therapeutic Equipment Lab, Biomedical Instrumentation Lab, Devices & ICs Lab, Signal and Image Processing Lab. The department has received funds from AICTE for Modernization of Biomedical Instrumentation Laboratory.

The department has also received funds from ICMR, CSIR, TNSCST, DST and Anna University. The students of the department have received various awards like Best Project Award and Best Paper Award.

## **OBJECTIVE OF SEMINAR**

This seminar will go a long way in enriching the knowledge and inspire the young minds to develop interest in biomedical imaging. Biomedical imaging is critically important for life sciences and health care. In this rapidly developing field, mathematics is one of the most powerful tools for developing image reconstruction as well as image processing theory and methods. Many of the innovations in biomedical imaging are fundamentally related to the mathematical sciences. With improvements in traditional imaging systems and emergence of novel imaging modalities such as molecular imaging, image analysis plays a vital role in determining the severity of the diseases. Mathematical models will provide improved accuracy in medical image analysis.

This seminar intends to provide the researcher and developers to share advanced mathematical models used for medical image analysis and a new array of interdisciplinary and challenging research opportunities in medical imaging.

## **COURSE CONTENTS**

### **Mathematical Models in Imaging Techniques**

- ✓ The Radon transform
- ✓ Unfiltered back-projection
- ✓ Fourier transform
- ✓ Filtered back-projection
- ✓ Circular Radon Transform
- ✓ Exponential Radon Transform
- ✓ Radon Inversion from Plane Integral
- ✓ Attenuated Radon Transform

### **Models in Radiological Systems**

- ✓ Expectation Maximization (EM) Algorithm
- ✓ Statistical Image Reconstruction Algorithm
- ✓ Markov Random Field

## **RESOURCE PERSONS**

Sessions will be handled by experienced faculty members from reputed institutions and experts from IT and medical fields.

## **TARGET AUDIENCE**

This seminar is open to faculty members working in various Engineering and Medical Colleges, Research scholars, PG Students, Industry Persons from relevant background in Science and Engineering.

## **BOARDING AND LODGING**

Accommodation and boarding if required will be provided in the college campus on first-come-first served basis.

## **REGISTRATION FEE DETAILS**

- Registration Fee: Rs.200/- per participant.
- The Registration fee may be paid by Demand Draft in favor of, **Velalar College of Engineering and Technology**, payable at **Erode**.

## **KIND NOTE**

- The registration is based on first come first served basis.
- Registration fee includes kit, certificate, lunch, tea and snacks.
- The participants must register along with demand draft well in advance.

## **LOCATION**

The college is situated at Thindal on the State Highways (SH-96) about 90 km from Coimbatore and 8 km from Erode Bus stand and Railway Station.