

# ANNAMALAI UNIVERSITY

## AICTE Sponsored Short Term Training Programme on Emerging Trends in Soft Computing Techniques for Control Engineering Applications (ETSCTCEA '19)

04.11.19 to 09.11.19

### Registration Form

Name : .....  
Designation : .....  
Department : .....  
Institution : .....  
Address  
for Communication : .....  
.....  
.....  
Contact Number : .....  
E-Mail : .....  
Technical Qualifications : .....  
Experience (in years) : .....  
Accommodation needed : Yes/No  
Is the Institution approved  
by AICTE: Yes/No  
Details of Registration Fee  
Amount : DD No :  
Date : Bank Name :

### Declaration by Participant

The information given above is true to the best of my knowledge.  
If selected, I agree to abide by the rules and regulations of the  
programme and shall attend the entire duration.

Place :

Date :

Signature

### Sponsorship Certificate

Dr/Mr/Ms. \_\_\_\_\_ is a bonafide full time  
faculty / employee of \_\_\_\_\_. He/She is sponsored to  
attend the Short Term Training Programme on "Emerging Trends in  
Soft Computing Techniques for Control Engineering Applications"  
from 04.11.2019 to 09.11.2019

Place :

Date : Signature of the Principal/ Head of the Institution

### Organizing Committee

#### Chief Patron

**Prof. V. MURUGESAN**

Vice-Chancellor  
Annamalai University

#### Patrons

**Dr. N. KRISHNAMOHAN**

Registrar i/c,  
Annamalai University

**Dr. K. RAGHUKANDAN**

Dean, FEAT,  
Annamalai University

#### Convener

**Dr. R. KAYALVIZHI**

Professor and Head,  
Dept. of E&I Engg.,  
Annamalai University

#### Co-ordinators

**Dr.G. SAKTHIVEL**

**Dr.R.VINODHA**

Professors  
Dept. of E&I Engg.,  
Annamalai University

### Address for correspondence

**Dr. G. SAKTHIVEL**

**Dr. R. VINODHA**

**Coordinators [ETSCTCEA '19]**

Dept. of Electronics and Instrumentation Engg.,  
Annamalai University.

Email: etsctcea2019@gmail.com

Mobile: 9443270714 / 9488493827



# ANNAMALAI UNIVERSITY

[Accredited with 'A' Grade by NAAC]



**AICTE  
Sponsored  
Short Term Training Programme  
on**

## Emerging Trends in Soft Computing Techniques for Control Engineering Applications (ETSCTCEA '19)

04.11.2019 to 09.11.2019



Co-ordinators

**Dr. G. SAKTHIVEL**

**Dr. R. VINODHA**

Organized by

**Dept. of Electronics & Instrumentation Engineering**

(DST-FIST Sponsored and SAP supported Department)

**Faculty of Engineering and Technology**

**Annamalai University**

**Annamalainagar-608002**

**Chidambaram, Tamilnadu**

**Web: www.annamalaiuniversity.ac.in**

## ABOUT THE UNIVERSITY

In the early 1920s, Rajah Sir S.R.M. Annamalai Chettiar founded Sri Minakshi College, Sri Minakshi Tamil College and Sri Minakshi Sanskrit College at Chidambaram. In 1928, Rajah Sir S.R.M. Annamalai Chettiar agreed with the local Government to handover the above-said institution for establishing a University. Thus, on 01.01.1929 Annamalai University was established as per Annamalai University Act 1928 (Tamil Nadu Act 1 of 1929). One of the most significant developments is the enactment of the Annamalai University Act, 2013 (Tamil Nadu Act 20 of 2013), which has come into force from September 25, 2013. Annamalai University is accredited with 'A' Grade by NAAC in 2014. "The NIRF-2018" by the Ministry of Human Resource Development (MHRD) has ranked the University in the band 101 - 150 in the overall category as well as the University Category. In the Pharmacy Category, the ranking is 20th in India. "The Times Higher Education World University Ranking - 2018" has ranked Annamalai University in 801 - 1000 for Overall category and 401 - 500 for Life Sciences category. "The CWTSLeiden Ranking 2017", on scientific impact of universities and on universities' involvement in scientific collaboration & scientific performance, has ranked the University at 14th based on the number of publications and 3rd based on the proportion of publications that, compared with other publications in the same field and in the same year, belong to the top 10% most frequently cited. "The Nielsen - India Today Ranking" (2017) has ranked Annamalai University 11th among the top 30 Universities in India. Among the top 100 institutions for Higher Education in India the "SCImago Institutional Ranking" has ranked Annamalai University as 4th in Tamil Nadu and 20th in India. Annamalai University is one of the largest unitary, teaching, and residential universities in Southern Asia comprising 10 Faculties and 49 departments of study. This University has played a pivotal role in providing access to higher education to thousands of youth cutting across the social spectrum, especially from economically and socially disadvantaged classes. In this respect, this University's service to the nation is tremendous.

## Organising Department

The Department of Electronics & Instrumentation Engineering established in 1988 is one among the 11 departments under the Faculty of Engineering and Technology, which celebrated its Diamond Jubilee in 2005. This Department offers B.E (Electronics & Instrumentation Engg.), M.E (Process Control & Instrumentation), M.E (Rehabilitative Instrumentation), M.E (Microelectronics & MEMS) and Doctoral Programs. Research work is carried out in emerging areas such as Advanced Process Control, Control of Power Electronic Converters and Drives, Embedded Control, Fault Diagnosis and Fault Tolerant Control, MEMS and Microelectronics, Bio-Medical Instrumentation, Measurement and Instrumentation etc.

## This Department has obtained the following distinctions

- DST- FIST sponsorship
- UGC- SAP support
- UGC -Non-SAP support
- National MEMS Design Centre
- UGC supported Major Research Projects
- OBAMA-SINGH knowledge Initiative INDO-US award support as a participating Department
- UGC innovative PG program grant support
- UGC support for B.Voc Programme

## About the Programme

Technological innovations in soft computing techniques have brought automation capabilities to new levels of applications. Due to a lack in comprehensibility, conventional controllers are often inferior to the intelligent controllers. Soft computing techniques provide an ability to make decisions and learning from the reliable data or expert's experience. Soft computing is a collection of methodologies that aim to exploit the tolerance for imprecision and uncertainty to achieve robustness, and low solution cost. The training programme will cover fundamental concepts of control system and soft computing techniques, interactions between different soft computing techniques, and application of soft computing techniques.

## The objectives of the Short Term Training Programme (STTP) are

- ❖ To provide a platform for interaction and exchange of ideas on recent trends in the field of soft computing techniques and its applications. The proposed programme will be centred on the development and application of these modern trends in the control system.
- ❖ To expose on soft computing techniques as an attractive alternative to standard hard computing paradigms that require a precisely stated analytical model and often a lot of computational time.

## Course Content/Coverage

- ❖ Overview of control system concepts
- ❖ Artificial Neural Networks
- ❖ Swarm Intelligence with Fuzzy Systems
- ❖ Evolutionary computation and genetic algorithms
- ❖ MATLAB-Computing Environment and Fundamentals of MATLAB Programming
- ❖ MATLAB/SIMULINK with integration of ANN and Fuzzy toolboxes
- ❖ 'R' Programming concepts - Machine learning
- ❖ Hybrid Algorithms
- ❖ Support Vector Machines
- ❖ Application of soft computing techniques in process Control, fault detection, classification, clustering, pattern recognition, signal and image processing.

## Resource Persons

Faculty experts from reputed colleges, Invited experts from Industries and Research organizations.

## Who can attend

Faculty from Engineering colleges / Polytechnic Institutions working in following disciplines: Instrumentation / Electrical / Computer Science / Chemical / Electronics and Communication and Mechanical Engineering.

## Accommodation

Working lunch and course material will be provided by the organizers. Interested participants will be offered accommodation in the University Hostels on payment basis. TA to outstation participants will be paid as per AICTE regulations. Reimbursement for travel will be made only on the production of original tickets.

## Location

Annamalai University is located at the abode of Lord Nataraja in the temple town of Chidambaram. Chidambaram is at 240 KM south of Chennai and around 150 KM north of Trichy.

## Important Dates

Submission of Registration Form (online)	: 19.10.2019
Submission of Registration Form(Hard copy)	: 24.10.2019
Intimation of selection (e-Mail)	: 25.10.2019
Confirmation of participation by selected participants (e-Mail)	: 30.10.2019

## Registration

Faculty from AICTE approved Institutions : 2000/-\*

*\*The Registration fee would be refunded to the participants after successful completion of the STTP.*

Payment in DD drawn in favour of "**The Registrar, Annamalai University**" payable at Annamalai Nagar, along with application form in the prescribed format duly recommended by the Head of the Institution should reach the Coordinators within the specified time.

The participants are requested to fill the online registration form (including DD details) through the following link: <https://forms.gle/zL5kbftKbPARCQt9>

**SELECTION IS LIMITED TO  
40 PARTICIPANTS BASED ON  
FIRST COME FIRST SERVE BASIS**