

# ABOUT THE DEPARTMENT

The Department of Applied Mathematics and Computational Science of our college offers a 5 Year Integrated M.Sc., (Data Science) Degree Programme from the academic year 2019-2020. This is an inter disciplinary programme covering Applied Mathematics, Statistics and Computer Science. The curriculum of this programme comprises of Theory, Theory cum Practical and Practical Courses. The Programme has foundation course, Professional core courses, Professional elective courses and employability enhancement courses. The courses are designed by qualified faculty members of our college with the support of professors from Indian Institute of Technology (IIT) Madras, Institute of Mathematical Science (IMS), Chennai and experts from leading software industries. This programme will enable the students of Data Science to apply suitable techniques and tools to real-time applications drawing on appropriate and relevant concepts and models from the computational sciences. These students will be positioned to pioneer new developments in this field, and to be leaders in Information Technology industry, the public sector, and academia.

# ABOUT THE INSTITUTION

Thiagarajar College of Engineering (TCE), established in 1957 by philanthropist Karumuttu Thiagarajan Chettiar, is a Government Aided Autonomous Institution affiliated with Anna University, Chennai, and approved by AICTE.

TCE offers 11 Undergraduate, 7 Postgraduate, and Ph.D. programs in Engineering, Architecture, and Science. Nestled in a serene, eco-friendly campus, TCE is renowned for its top-tier infrastructure and commitment to academic excellence.

TCE has embraced reforms in its teaching learning process, including a Competency-Based Curriculum, Outcome- Based Education, and the CDIO framework since 2018, emphasizing hands on training.

The launch of MOOCs in 2021 and the Thiagarajar Research Fellowship (TRF) for Ph.D. scholars underscore TCE's focus on research innovation. Industry collaborations with global leaders, such as TVS Motors, have enhanced curriculum design and established cutting-edge labs like the T. S. Srinivasan Centre for Automotive research.

TCE's participation in the Technical Education Quality Improvement Programme (TEQIP) under MHRD has driven faculty development, industry - supported research, and governance improvements, solidifying its reputation as a leader in technical education.

# OUR VISION

To provide world class quality technical education with strong ethical values.



**Thiagarajar** 68  
**College of Engineering** YEARS  
1957-2025  
Celebrating  
Academic Excellence  
*where quality and ethics matter*



**Centre For Continuing Education**  
AICTE TRAINING AND LEARNING ACADEMY (ATAL)  
SPONSORED 6 DAY FDP



ON



**Deep Learning and Computer Vision**  
in the field of Clinical Research



**DEPARTMENT OF APPLIED MATHEMATICS**  
AND  
**COMPUTATIONAL SCIENCE**



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## ORGANIZING COMMITTEE



**Chief Patron**  
Mr. K. Hari Thiagarajan  
Chairman & Correspondent



**Patron**  
Dr. L. Ashok Kumar,  
Principal



**Convener**  
Dr. S. Parthasarathy,  
Professor & Head

### Coordinators



Dr. T. Chandrakumar  
Associate Professor  
Dept of AMCS, TCE



Dr. M. S. Sassirekha  
Assistant Professor  
Dept of AMCS, TCE



Ms. R. Saraswathi Meena  
Assistant Professor  
Dept of AMCS, TCE

## IMPORTANT DATES

FDP Start date : 17<sup>th</sup> February 2025  
End Date : 22<sup>nd</sup> February 2025  
Last date for registration: 5th February 2025

## GUIDELINES

The entire Programme will be conducted through online mode. The details of the programme will be communicated to the selected candidates through their registered e-mail. Assessment test will also be conducted at the end of the programme. Minimum 80% attendance and 60% marks in the test are required to obtain the certificate

## REGISTRATION LINK

Registration is compulsory for the participants. (Registration is limited to 100 participants on First come First serve basis).

For registration, use the following link  
Registration ID:  
<https://atalacademy.aicteindia.org/login>

## ELIGIBILITY

Faculty members of AICTE approved institutions, research scholars, participants from government, industry (bureaucrats / technicians etc.) and staff of host institution.

## INTEGRITY LEARNING IS THE MAIN FOUNDATION

The AICTE Training and Learning (ATAL) Academy, established by the Ministry of Education, aims to empower faculty to achieve the goals of higher education in access, equity, and quality. It focuses on training educators and technicians with the latest tools and technologies in emerging areas like AI, Data Science, and IoT. ATAL offers workshops, faculty development programs, orientations, and peer mentoring to foster innovation, research, and entrepreneurship. It supports technical institutions in delivering high quality education and building a skilled work force. Through its initiatives, ATAL contributes to a knowledge-driven economy and the advancement of technical education in India.

## OBJECTIVES

### Understanding Advanced Technologies

Equip faculty with foundational and advanced knowledge of deep learning and computer vision techniques relevant to clinical research and healthcare applications.

### Enhancing Research Skills

Develop the ability to design, implement, and analyze deep learning models and computer vision algorithms to address challenges in clinical data interpretation, diagnosis, and treatment planning.

### Promoting Innovation

Encourage innovative approaches in clinical research by utilizing AI tools to identify patterns, predict outcomes, and optimize healthcare delivery.

### Hands-on Training

Provide practical, hands-on experience with software tools, frameworks, and datasets commonly used in deep learning and computer vision applications in clinical settings.

### Inter Disciplinary Collaboration

Foster collaboration among faculty members from diverse backgrounds to integrate AI techniques into multidisciplinary clinical research, enhancing overall research quality and impact.

FOR FURTHER DETAILS

Dr. T. Chandrakumar

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# FDP SCHEDULE

DAY 1	6:00 - 6:30PM	Inaugural Session General Talk about clinical research by Prof. Sushmitha Mitra
	6:30 - 8:00PM	Session 1 Future of computer vision in medical field by Dr. Ganapathy Krishnamurthi
	8:00 - 9:30PM	Session 2 Clinical image features and Object Recognition by Dr. S. Sumitra
DAY 2	6:00 - 7:30PM	Session 3 Convolutional Networks for clinical data set by Dr. Ramanujam E
	7:30 - 9:00PM	Session 4 Deep Feedforward networks by Dr. Ramanujam E
DAY 3	6:00 - 7:30PM	Session 5 Evaluating AI models for reliable Clinical Data Analysis by Dr. Suganya R
	7:30 - 9:00PM	Session 6 Enhancing surgical precision with Deep learning in Pre-operative planning by Dr. Suganya R
DAY 4	6:00 - 7:30PM	Session 7 Regularization of deep learning by Mr. Norton Sa Stanley
	7:30 - 9:00PM	Session 8 Image Captioning by Dr. Sudharsun Sathiappan
DAY 5	6:00 - 7:30PM	Session 9 Optimization of Training Deep Models by Dr. Malaya Kumar Nath
	7:30 - 9:00PM	Session 10 Advanced CNN Architecture suitable for Clinical Dataset by Ms. Nagalakshmi C
DAY 6	2:00 - 3:30PM	Session 11 Sequence Modelling: Recurrent Neural Networks by Prof. Oge Marques
	3:30 - 5:00PM	Session 12 Optical Flow and Feature matching by Dr. Vandana Sharma
	5:00 - 6:30PM	Session 13 Computer Vision for Brain images by Mr. S Maheshwaran
	6:30 - 7:30PM	Online Test and Feedback
	7:30 - 8:00PM	Valedictory Session

# FDP EXPERTS LIST



**Prof. Sushmita Mitra,**  
Full Professor (HAG),  
Machine Intelligence Unit (MIU),  
Indian Statistical Institute,  
Kolkata



**Dr. Ganapathy Krishnamurthi,**  
Full Professor,  
Indian Institute of Technology,  
Chennai



**Dr. S. Sumitra,**  
Professor,  
Indian Institute of Space Science and  
Technology,  
Thiruvananthapuram



**Dr. Ramanujam E,**  
Assistant Professor,  
National Institute of Technology,  
Silchar



**Dr. R. Suganya,**  
Senior Associate Professor,  
Vellore Institute of Technology,  
Chennai



**Mr. Norton Sa Stanley,**  
Senior Research Associate,  
IBM Research Labs,  
Bangalore



**Dr. Sudarsun sathiappan,**  
Chief Scientist & Co-Founder,  
Buddi.AI



**Dr. Malaya Kumar Nath,**  
Head & Assistant Professor,  
National Institute of Technology,  
Puducherry



**Dr. Oge Marques,**  
Professor of Computer Science  
and Engineering,  
Florida Atlantic University, USA



**Dr. Vandana Sharma,**  
Associate Professor,  
CHRIST (Deemed to be University),  
Delhi-NCR



**Mr. S. Maheswaran,**  
Senior Research & Development Manager,  
Aptean India Private Limited,  
Madurai



**Mrs. C. Nagalakshmi,**  
Vice President,  
Bank of New York,  
Mellon

