

## Centre for Continuing Education of NIT Warangal:

The Centre for Continuing Education of NIT Warangal organizes Continuing Education Programmes and Workshops in the frontier areas of Science, Engineering, Technology, Management, Humanities, Social Science and socially relevant themes on self-financing basis in three different modes: (i) At NIT Warangal by NIT Warangal (ii) At NIT Warangal in collaboration with other Organizations (iii) By NIT Warangal Faculty at the Host Organization/Institute.

### About NIT Warangal:

National Institute of Technology Warangal, formerly known as Regional Engineering College was established in 1959. Over the years it has developed into a premier institute of higher learning and is ranked among the top technical education institutions in India. There are 13 Departments offering eight undergraduate and 32 post-graduate programmes besides doctoral programmes. About 5000 students across the country and about 500 international students study in the campus. It is a fully residential campus sprawling over 250 acres with excellent infrastructure, state of the art library, seminar halls, guest houses and laboratories.



## Brief Profile of the Department of CSE:

The Department of Computer Science & Engineering was established in the year 1991. The department offers high quality undergraduate, postgraduate and doctoral programs. The Department has a team of well experienced faculty, graduated from IIT's, NIT's, Central Universities and other premier Institutes of higher learning. The department provides state-of-art research facilities to generate knowledge and develop technologies in the thrust areas of Computer Science and Engineering.

**For any query regarding this programme, please contact the Coordinators.**

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## Center for Continuing Education NIT Warangal

## Online Continuing Education Programme on “Machine Learning and Optimization for Uncertain Decision Making”

**5<sup>th</sup> March – 9<sup>th</sup> March, 2021**  
**5 PM-8 PM**

### Call for Registration and Participation

#### Coordinators

**Dr. Sujit Das**  
&  
**Dr. M. Srinivas**

**Organized by**  
**Department of CSE**

**In association with the**  
**Center for Continuing Education**



## Overview of the FDP:

Machine learning and Optimization are two important components of Soft computing and have a huge impact towards uncertain decision-making process. Machine learning algorithms are helpful to analyze, predict, interpret, classify and automatically identify data and retrieve the useful information accurately, whereas optimization techniques are well known to determine good-enough solution in fast-enough manner even in the presence of uncertainties. This FDP is aimed to explore the applicability of Machine Learning and Optimization techniques to solve various real-life decision making problems where the available information is incomplete and imprecise.

## Objectives:

- ✦ To enable participants to learn and conceptualize Machine Learning methods in various areas like biomedical, defense, e-commerce, education, healthcare, etc.
- ✦ To investigate the fundamental concepts and applicability of optimization methods.
- ✦ To explore the opportunities of hybridizing optimization algorithms in machine learning paradigm for generating better outcomes.
- ✦ Effectively implement Deep Learning models for image classification using Python.
- ✦ Implement Computer Vision and Medical image applications using python.
- ✦ Application of MCDM techniques to solve day-to-day decision-making problems

## Topics to be covered:

- ✦ Multi-criteria decision-making techniques: theory and applications
- ✦ Multi-objective search optimization
- ✦ Multi-objective Machine Learning (MOML)
- ✦ Data driven and model based multi-criteria optimization
- ✦ Impacts of AI and Machine Learning towards societal digital transformation
- ✦ Deep learning algorithm and Multi-criteria decision-making
- ✦ Uncertain optimization and its impact on Machine learning
- ✦ Application of Machine learning models in Covid-19 research
- ✦ Improvement and research opportunities of various meta-heuristics algorithms
- ✦ Hands-on sessions are covered using Python Programming.

## Resource Persons:

Eminent faculty from IITs, NITs, Central Universities, Experts from Industries and Senior Faculty members from different departments of NIT Warangal will deliver lectures and conduct hands on sessions.

**Registration is open to:** Faculty members in all disciplines of Engineering, Sciences, Mathematics, Life sciences, Management, Post-Doctoral Fellows, Research Scholars, PG students, UG students who have an aptitude to work in the areas of Machine learning, Optimization, and MCDM techniques.

**How to Apply:** Eligible candidates may apply by filling the following google form with payment proof on or before 4<sup>th</sup> March, 2021.

<https://forms.gle/SiBTAR1uknUUwLcd7>

## Registration fee:

Category	Amount
Faculty, Post doctoral fellows, Research Scholars, PG students, UG students	Rs. 500 /-
Industry participants	Rs. 1000/-

Registration fee may be remitted Online through NEFT to the Bank account given below. Proof of remittance of the requisite registration fee (with transaction number if online transaction) shall be uploaded in the google form.

<b>Account Number</b>	62403680215 (Savings Account)
<b>Account Name</b>	Center for Continuing Education NITW
<b>Bank Name:</b>	State Bank of India (SBI)
<b>Branch:</b>	NIT Warangal
<b>IFSC Code:</b>	SBIN0020149

## Confirmation of Participation:

On receipt of the google form and fee remittance receipt, participants will be sent confirmation of their participation through email by 28<sup>th</sup> February, 2021. As the programme is conducted online with hands-on sessions, the number of participants in the workshop is limited to 100. *Candidates are advised to register early to avoid disappointment.*