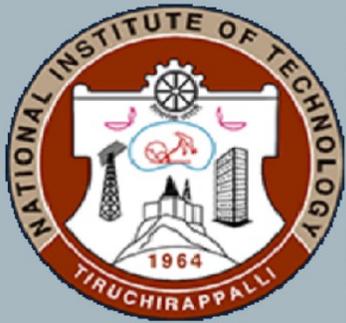


# Department of ECE National Institute of Technology Tiruchirappalli

Jan 24-25th , 2019



## Two day workshop on Pattern Recognition and Computational Intelligence

### About the workshop

*The objective of the workshop is to introduce the mathematical approach to Pattern recognition and the Computational Intelligence techniques.*

*This workshop mainly focus on the faculty, Research scholars, PG/UG students from multidisciplinary domain those who are interested in doing research using Machine learning approach.*

*This workshop will enhance the usage of MATLAB / Python based Machine learning tool boxes by the users from multidisciplinary domain.*

*Matlab illustrations are also shown*

### Topics covered



Dimensionality reduction techniques



Probabilistic approach



Regression and the classification techniques



Computational intelligence techniques

### Registration

Link for ONLINE registration

<https://goo.gl/forms/16vMC8I8ZNALAIEC3>  
Rs. 1000 inclusion of lunch and kit .

*Fee is to be paid in demand draft drawn in favour of "The Director, NIT Tiruchirappalli", payable at Tiruchirappalli*

*Last date for online registration: ~~Dec 31st 2018~~  
Extended upto: Jan 11, 2019 (Hard deadline)  
Date of event: Jan 24-25th 2019*

**Note: Registrations is complete once we receive the hard copy of the Demand Draft.**

**FIRST COME FIRST SERVED BASIS**

Maximum number of participants = 50

Registrations will be closed once the count reaches the maximum limit. Hurry!!!

For further details, please contact the following scholars

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### Co-ordinator:

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## Workshop Schedule

### Day 1: 24-01-2019

8.30 a.m. to 9.30 a.m.	Registration and Reception
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### Day 1 (FN): Dimensionality reduction techniques and Discriminant approach to classification

9.30 a.m. to 11.00 a.m.	Principle Component Analysis, Linear Discriminant Analysis, Kernel Linear Discriminant Analysis, Independent Component Analysis, Discriminant classifier (Type 1,2,3), Support Vector Machine
11.00 a.m. to 11.10 a.m	Break
11.10 a.m. to 01.00 p.m.	Tutorial on Dimensionality reduction techniques and Discriminant approach to classification
1.00 p.m. to 2.00 p.m.	Lunch Break

### Day 1 (AN): Regression techniques

2.00 p.m. to 3.30 p.m	Regressive techniques: Linear regression, Minimum Mean Square Estimation, Bias-variance decomposition , Maximum Likelihood technique, Least square techniques, Regularization, Kernel Trick for Regularization
3.30 p.m. to 3.40 p.m.	Break
3.40 p.m. to 5.00 p.m	Tutorial on Regression techniques

### Day2: 25-01-2019

### Day 2 (FN): Probabilistic approach to classification

9.00 a.m. to 11.00 a.m.	Probabilistic approach to classification-Logistic regression, Gaussian Mixture model (Combinational model), Hidden Markov Model (Sequential model)
11.00 a.m. to 11.10 a.m	Break
11.10 a.m. to 1.00 p.m.	Tutorial on Probabilistic approach to classification
1.00 p.m. to 2.00 p.m.	Lunch break

### Day 2 (AN): Computational intelligence

2.00 p.m. to 3.30 p.m.	Particle Swarm Optimization, Ant colony technique, Bacterial Foraging, Introduction to Artificial Neural Network, Convolution Neural Network, LSTM, Generative Adversarial Network
3.30 p.m. to 3.40 p.m.	Break
3.40 p.m. to 5.00 p.m.	Tutorial on Computational intelligence