Workshop on Machine Learning, Deep Learning and Computational Intelligence for Wireless Communication (MDCWC2020)

May 11-13, 2020

National Institute of Technology Tiruchirappalli

Important Dates

Paper Submission:
31 December 2019
Acceptance notification:
15 February 2020
Camera ready submission and Registration:
1 March 2020
Registration Fee:
₹ 6000/-
(Payment through SBI i collect)

Objective of the workshop

Due to the feasibility of collecting huge data from mobile and wireless networks, there are many possibilities of using Machine learning, Deep-learning and the Computational Intelligence to interpret and to hunt knowledge from the collected data. The workshop aims in consolidating the experimental results integrating the Machine Learning, Deep Learning and Computational Intelligence for Wireless Communication.

The workshop invites original research contributions in the following data driven wireless communication applications (Not limited to) implemented using one or more of the following ML, DL and Computational intelligence algorithms.

Wireless Communication

- Network prediction, Traffic classification, Call detail record mining
- Mobile health care, Mobile pattern recognition, Natural language processing, Automatic Speech processing
- Mobility Analysis, Indoor Localization
- Wireless Sensor Networks (WSN)
- Energy minimization, Routing, Scheduling, Resource allocation, Multiple access, Power control
- Malware detection, Cyber security, Flooding attacks detection, Mobile apps sniffing
- MIMO detection, Signal detection in MIMO-OFDM, Modulation recognition,
- Channel Estimation, MIMO nonlinear equalization,
- Super-resolution channel and direction of arrival estimation,
- NOMA, mm-Wave channel model, Full duplex, OFDM/FBMC, NB-IOT

Machine Learning

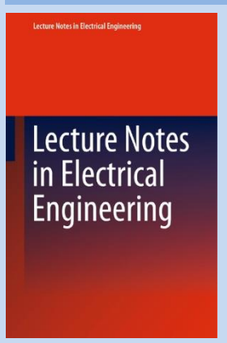
- Multiple input multiple output regression
- Probabilistic discriminative approach
- Multi-class logistic Regression
- Probabilistic generative model
- Support Vector Machine
- Dimensionality reduction techniques

Deep Learning

- Multilayer perceptron
- Boltzmann Machine
- Auto-Encoders
- Convolutional Neural Network
- Recurrent Neural Network
- Generative Adversarial Network
- Deep Reinforcement Learning

Computational Intelligence

- Particle Swarm Optimization
- Bacterial Foraging
- Simulated Annealing
- Ant colony technique
- Genetic algorithm
- Social Emotional Optimization Algorithm
- Social Evolutionary Learning Algorithm



Publication

Researchers are invited to submit their original research findings. Submitted papers are subjected to Double review process and the selected papers will be published as the book series **Lecture Notes in Electrical Engineering (Confirmed).** Detailed information on paper submission, accommodation and travel will be posted on the workshop website.

Papers can be submitted via EasyChair through this link. Paper template is given here

Patron	Professor. Dr. Mini Shaji Thomas , Director, National Institute of Technology Tiruchirappalli
Technical Program committee (External members)(Complete list will be released shortly)	
K K Biswas Retired Professor, Indian Institute of Technology Delhi Currently at IndraPrastha Institute of Information Technology Delhi	Anand Kulkarni Symbiosis Institute of Technology, Pune
Jithin Jagannath Director, Marconi-Rosenblatt AI/ML Innovation Lab, Research scientist, Andro computational solutions, New York	Lakshmanan Senior Research scientist, Mayachitra, Inc. Deep learning data solutions, California
Akhil Gupta Lovely Professional University,Phagwara, Punjab	Krishna Moorthy Indian Institute of Information Technology Tiruchirappalli
Swaminathan Indian Institute of Technology Indore	Sankar Nair Qualcomm, Chennai
Vineetha Yogesh Qualcomm, Bangalore	Gaurav Purohit CSIR-CEERI,Pilani, Rajesthan
Abhinav M Bit Technologies, Bangalore	Florintina GE Electronics, Bangalore
Technical Programme committee (Internal members)	
P. Muthuchidambaranathan, ECE, NIT Trichy	B.Janet, CA, NIT Trichy
B.Malarkodi, ECE, NIT Trichy	Rajeswari Sridhar, CSE, NIT Trichy
Varun P Gopi,ECE, NIT Trichy	V.Sudha,ECE, NIT Trichy

Coordinators

Dr. E. S. Gopi,
Associate Professor/ECE, NIT Trichy
Dr. B. Rebekka,
Assistant Professor/ECE, NIT Trichy
Dr. G. Thavasi Raja,
Assistant Professor/ECE, NIT Trichy

Organized by

Pattern Recognition and Computational Intelligence Laboratory,
Department of Electronics and Communication Engineering,
National Institute of Technology Tiruchirappalli

COMPSIG NITT

Reference for related works

Machine Learning Paradigms for Next-Generation Wireless Networks

Machine Learning for Wireless Communication Channel Modeling: An Overview

Links to the dataset

CRAWDAD dataset

UMass Trace Repository