MDCWC 2020

ONLINE CONFERENCE

Machine Learning Deep Learning and Computational Intelligence for wireless communication

22nd October to 24th October 2020

Last date for submitting the papers through easychair: 31st August 2020

All the accepted papers will be published as the chapter in the <u>Lecture Notes in Electrical Engineering</u>, <u>Springer publications</u> (ISI Proceedings, EI-Compendex, Scopus, Meta press, Web of science)



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/survey paper under the following categories.

- (1) The data driven wireless communication applications using ML, DL and Computational intelligence.
- (2) Optimization algorithm/technique for ML, DL and Computational intelligence.
- (3) Related mobile data applications.
- (4) Survey/Review papers will also be considered.
- ζ Status of the submitted papers will be intimated immediate after the review gets over.
- ζ Registration needs to be done within 10 days after getting the notification along with the revised paper and copyright form. Payment through <u>SBI</u>
- ζ Registration is complete once the filledup Google form is submitted: <u>Author registration</u>, <u>Participants</u>

Co-ordinator: Dr.E.S.Gopi (esgopi@nitt.edu), Associate professor, Department of ECE Series Editor, Signals and Communication Technology (Springer publications, Scopus indexed)

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- ζ S S.Karthikeyan/ECE
- ζ Varun P Gopi/ECE

Topics (Not limited to)

Machine Learning

- Multiple input multiple Output regression
- ζ Probabilistic discriminative approach
- ζ Multi-class Logistic Regression
- ζ Probabilistic generative model
- *ζ* Support Vector Machine
- ζ Dimensionality reduction Techniques.

Deep Learning

- ζ Multilayer perceptron
- ζ Boltzmann Machine
- ۲ Auto-Encoders
- ζ Convolution Neural Network
- ζ Recurrent Neural Network
- ζ Generative Adversarial Network
- ζ Deep Reinforcement Learning

Computational Intelligence

- ζ Particle Swarm Optimization
- ζ Bacterial Foraging
- ζ Simulated Annealing
- ζ Ant Colony Technique
- ζ Genetic algorithm
- ζ Social Emotional Optimization Algorithm
- ζ Social evolutionary Learning Algorithm

Optimization algorithms

Adagrad, Adadelta, RMSprop, Adam, SGD

Mobile data applications

- ζ Mobile health care
- ζ Mobile pattern recognition
- ζ Natural language processing
- ζ Image processing

Wireless Communication

- ζ Network prediction, Traffic classification, Call detail record mining
- ζ Automatic speech processing
- ζ Mobility Analysis, Indoor Localization
- ζ Energy minimization, Routing, Scheduling, Resource allocation, Multiple access, Power control
- Malware detection, Cyber security, Flooding attacks detection, Mobile apps sniffing





