

**5 Days workshop on  
Machine Learning, Deep learning for Wireless Communication  
July 29<sup>th</sup> to 31<sup>th</sup> 2019**

**Tentative programme schedule**

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| <b>Day 1: Machine learning</b>                                       | <ul style="list-style-type: none"> <li>• Dimensionality reduction techniques</li> <li>• Multiple input , Multiple output Linear regression</li> <li>• Probabilistic generative model</li> <li>• Probabilistic discriminative model</li> <li>• Sparse Kernel Machines</li> <li>• Support Vector Machine</li> </ul>  |
| <b>Day 2: Deep learning</b>  | <ul style="list-style-type: none"> <li>• Multilayer perceptron</li> <li>• Boltzmann Machine</li> <li>• Auto-Encoders</li> <li>• Convolutional Neural Network</li> </ul>  |
| <b>Day 3: Deep learning</b>  | <ul style="list-style-type: none"> <li>• Recurrent Neural Network</li> <li>• Generative Adversarial Network</li> <li>• Deep Reinforcement Learning</li> </ul>  |
| <b>Day 4: Tutorial</b>   | <b>Machine learning and Deep learning using<br/>Python programming</b>   |
| <b>Day 5: Data driven Applications in<br/>Wireless Communication</b> | <ul style="list-style-type: none"> <li>• Network prediction, Traffic classification, Call detail record mining.</li> <li>• Mobile health care, Mobile pattern recognition, Natural language processing, Automatic Speech Processing</li> <li>• Mobility analysis, Indoor localization</li> <li>• Wireless Sensor Networks (WSN)</li> <li>• Energy minimization, Routing, Scheduling, Resource allocation, Multiple access, Power control</li> <li>• Malware detection, Cyber security , Flooding attacks detection, Mobile apps sniffing</li> <li>• MIMO detection, Signal detection in MIMO-OFDM, Modulation recognition, Channel estimation, MIMO nonlinear equalization, Super -resolution channel and direction-of-arrival estimation, etc.</li> </ul> |
| <b>Last date for registration</b>                                    | <b>July 20<sup>th</sup> 2019</b>   |
| <b>Registration fee*</b><br>(Includes workshop kit and Lunch only)   | <b>Rs.3000 (Including GST)</b>   |
| <b>QR (Newsletter COMPSIG NITT)</b>                                  | <p><b>Dr. E.S. Gopi,</b><br/>Coordinator and Head, Pattern recognition and the computational intelligence laboratory<br/>Department of Electronics and Communication Engineering<br/>National Institute of Technology Tiruchirappalli<br/>Series editor: Signals and Communication<br/>(Springer publications) Click here:<br/>Phone number: 914312503314/ 9500423313</p>  |
| <b>Link to the previous workshop</b>                                 | <b>Accommodations details: <a href="#">click here</a></b>  |