

2019-20

MediaEval Research Initiative

9th August -11th October

MediaEval is a benchmarking contest that offers challenges in multimedia retrieval, access and exploration. Their mission is to allow researchers working in computer science and other multimedia related field an opportunity to work on tasks that are related to human and social aspects of multimedia. MediaEval emphasizes the 'multi' in multimedia and seeks tasks involving multiple modalities, e.g., audio, visual, textual, and/or contextual. Their larger aim is to promote reproducible research that makes multimedia a positive force for society. We selected students who are interested in the research field to work on different problem statements and trained them to find and present the best solution provided by the MediaEval problem statements. The students are given options to work on from the different problem statements. Three teams were formed and good performance was given by all.

Analog Synthesizer Demo cum Contest

19th September 2019

This event was all about learning Analog synthesizers with all relevant circuitry and also signal acquisition with MATLAB and Aurdino. A contest will be conducted and exciting prizes were awarded for the participants who applied their knowledge.



Machine learning – from features to modelling –Signal processing perspective

27 Aug 2019

Resource Person : Dr P. Vijayalakshmi (Senior Member, IEEE, Member, IEEE Signal Processing Society, Fellow, IETE)

Machine learning algorithms are being significantly used for pattern classification problems. Choice of appropriate feature vectors will make any pattern classification problem trivial. Selecting discriminating feature vectors requires understanding the underlying process that has generated these features, making a machine learning algorithm a knowledge-driven technique. Instead of directly using all feature vectors, modelling involves a parametric representation of these features. Meaning, modelling a pattern is simply a parametric estimation and optimization problem. Greater the number of parameters better the classification. However, the curse of dimensionality has forced us to move from the knowledge-driven machine learning techniques to data-driven techniques. The audience clearly understood the basics of machine learning. Feature extraction for developing machine learning algorithms and how to use the feature vectors properly to make a knowledge-driven machine learning model was explained very well. All the doubts of the audience were cleared by Dr.P. Vijayalakshmi ma'am. It was a great learning experience.

Neural Prostheses for Amputees and Patients with Spinal Cord Injuries

22 Oct 2019

Dr. V John Mathews Professor, School of Electrical Engineering and Computer Science Oregon State University

Recent technological innovations such as functional neuro-muscular stimulation (FNS) offer considerable benefits to paralyzed individuals. This talk describes how smooth muscle movements can be evoked using electrical stimulation via electrode arrays inserted into peripheral nerves. It also described efforts to decode human motor intent from neural signals. Results of experiments involving animals and human amputee subjects were discussed. It was an excellent talk by Dr. V John Mathews who explained everything clearly and resolved all the audience's doubts. It was a great learning experience.



The Art of Writing a Research Paper

February 15, 2020

This workshop was organised by VIT Chennai IEEE Student Branch and IEEE SPS Student Chapter in association with IEEE Young Professionals. It gave the participants a keen insight on the nuances of presenting and writing a research paper, with speeches from Dr B Chitti Babu (Assistant Professor, IIIT D&M) and Dr Vidya Durai (Director of Philanthropy and CSR at BNY Mellon Technology); along with

a hands- on session on LaTeX led by VIT Chennai IEEE SPS Student Chapter President Abitha K Thyagarajan & volunteer Jayasri Vaidyaraman.

