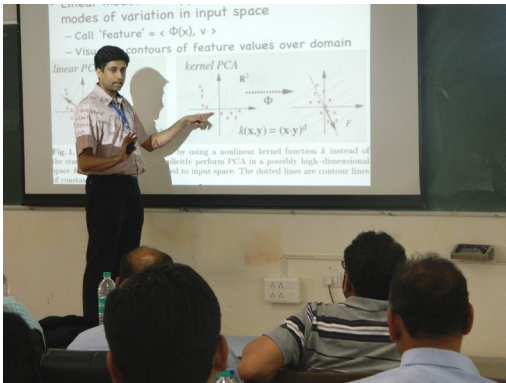


## Workshop on Machine Learning for Medical Image Analysis

The Multimedia, Analytics and Systems Group of the School of Computing and Electrical Engineering, IIT Mandi organized a five-day workshop on Machine Learning for Medical Image Analysis, from 18-22 June 2016. This is the second workshop of this kind at IIT Mandi after the one held in 2015.

Machine learning is the study and development of algorithms enabling computers to “learn”, in a manner analogous to the human learning process. Of late, there has been a tremendous surge in the application of machine learning algorithms for analysis of medical images and in the diagnostic decision making purposes.

The workshop was focused on principles of nuclear magnetic resonance and applying machine learning techniques for the analysis of magnetic resonance imaging (MRI) and applying the same in diagnostic decision making. Techniques proposed in this research area will enable to make faster and more accurate diagnosis of MRI images, and help reduce doctors' workloads.



Nine speakers, who are active researchers in this area delivered lectures over the five days. The speakers included Prof. C. L. Khetrpal, Dr. Dinesh Gupta, Dr. Anupam Guleria from the Centre of Biomedical Research, Lucknow, Dr. N. R. Jagannathan, from the All India Institute of Medical Sciences, New Delhi, Dr. Debdoot Sheet, from IIT Kharagpur, Dr. Bharat Biswal, from the New Jersey Institute of Technology, USA, Dr. SuyashAwate from IIT Bombay, Dr. Dipanjan Roy from Centre for Behavioral and Cognitive Sciences, University of Allahabad, Dr. Chirag Ahuja from PGIMER Chandigarh and Mr. Sutirth Vaidya S. from Predible Health, a Bangalore-based company.

While Prof. Khetrupal, Prof. Jagannathan, Prof. Bharat, Dr. Dinesh and Dr. Anupam emphasized on the techniques of nuclear magnetic resonance (NMR), MR imaging and MR spectroscopic modalities, Dr. Debdoot and Dr. Suyash focused on the machine learning algorithms as applied to the analysis of MR images and spectra. Dr. Chirag lectured on the clinical diagnosis using MR techniques and the difficulties faced by clinicians in diagnostic decision making. Mr. Sutirth presented a work done on the use of neural network techniques for MR image analysis.

Over 55 participants, including research scholars, students and faculty from several institutions of the country participated in the workshop.

