

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Department of Electronics and Communication Engineering organized a Three day workshop on “**Biomedical Signal Processing in Computer Vision - Techniques and Advancements**” by the experts from ADInstruments, New Delhi from October 10 -12, 2019. It was conducted by Mr. JKL Prasad (BDM - North & East) and Mr. Muktesh Sharma (Application Specialist - North).

ADInstruments is an Australia - New Zealand based international company and is global leader in providing engineering-leading software solutions and data acquisition systems. They create simple, flexible and accurate tools to help scientists and educators record and analyze data quickly and efficiently. They provide user-friendly software, specialised training options and solution-focused systems of the highest quality. PowerLab is a data acquisition (DAQ) device engineered for precise, consistent, reliable data acquisition that are capable of recording at speeds of up to 400,000 samples per second continuously to disk (aggregate), and are compatible with instruments, signal conditioners, and transducers.

Delsys Trigno Wireless system incorporates a library of ready-to-use calculations for signal processing and calculations the way user wants, user-friendly graphical interface, quick view tools and batch processing capabilities that make post-processing of EMG, biomechanical sensors signals simple and efficient. It also allows seamless integration with video files and external data files via Import/Export features and can be integrated with powerful engineering tools like MATLAB and LabVIEW.

Equival Wireless system records and intelligently processes data measured from the real-time mobile person and transmits this over a wireless interface. It measures ECG, heart rate, breathing rate, skin temperature, tri-axial acceleration, activity and body position, and connects with external sensors to store and transmit their data which streams wirelessly straight into LabChart Software. Wireless ancillaries allow recording of additional parameters, such as core temperature (recorded by an ingestible pill), galvanic skin response and oxygen saturation. The application of above along with Robotics Arm, Biosignal processing is in Biomedical Engineering Laboratories, Motor-control Research , Biofeedback studies, Gait Analysis, Body Balance Analysis or any Research Project in which consideration of Human Physiological parameters are important.

The aim of the talk to introduce the Researchers, Engineering students and Educators with Innovative, Powerful, Flexible and Accurate Wireless Products (Delsys and Equivital) and Data acquisition system (Teaching system) of ADInstruments which will help them to record and analyze data quickly and efficiently. Our wireless physiological recording solutions are able to stream a broad range of signals direct into LabChart software so that user can simultaneously display and analyse multiple signals in real-time.

More than 250 students, 60 participants and 50 faculty members have attended the workshop.

Workshop was a joint effort of Dr. Shruti Jain (Associate Professor, Department of ECE) and Dr. Meenakshi Sood (Assistant Professor, Department of ECE).



