Indian Society of Lighting Engineers (ISLE) is a professional body in the field of illumination engineering with a broad based membership of scientists, engineers, architects, academicians, researchers and designers. ISLE is affiliated to CIE, the International Commission on Illumination. ISLE is closely associated with the bureau of Indian Standards, the Department of Science and Technology, the Ministry of Power and the Ministry of Non conventional Energy Sources.

The Indian Society for Technical Education is a national, professional, non-profit making Society registered under the Societies Registration Act of 1860. First started in 1941 as the Association of Principals of Technical institutions (APTI), it was converted into “Indian Society for Technical Education” in 1968 with a view to enlarge its activities to advance the cause of technical education. The main goal is to serve as a common forum for stimulating and guiding its members to formulate the aims, goals and responsibilities of technical education for the service of mankind and the advancement of general welfare.

Poornima Group of Institutions (PGI) was established in the year 2009 with the aim to provide world class technical and scientific exposure. World Trade Park is the centre of inter-national trading for a global ex-posure.

Poornima University is fully devoted to undergraduate and Post Graduate teaching in Engineering, Management, Basic Sciences, Architecture for stimulating and guiding its members to formulate the aims, goals and responsibilities of technical education for the service of mankind and the advancement of general welfare.

The registration fees include workshop kit, tea snacks and lunch. Participants from academia, industries and other institutions will have to bear the expenses towards travel, accommodation and boarding. Limited accommodation on payment basis will be available on first come first serve basis. Candidates should indicate the requirement of accommodation before the commencement of workshop. The charges for lodging & boarding are Rs. 300/- Per day.

CONVENERS
Mr. Devendra Somwanshi, Associate Professor & Coordinator M. Tech, ASRC, PU
Mr. Bhanwarveer Singh, Associate Professor & Head, Department of Electronics, Poornima Group of Institutions

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Mr. Aditya Sharma, Assistant Professor, PGI

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The objectives of the workshop are to expose the participants to:

- The fundamentals of Bio-signals, Medical Imaging and their analysis
- Time and frequency domain analysis of Bio-medical signals and images
- Implementing different algorithms for enhancement, compression, segmentation, of various medical images
- Microwave Imaging & its Biomedical Applications.
- Hands-on experience for implementation of concepts related to health care applications

The objectives of the workshop are to attend the workshop.

Rationale

Increasing health issues and short fall of expertise available is demanding need for both remote and local health monitoring or critically ill and elderly people. With the advancements of biomedical sensors and technologies, research in processing sensory signals and an early prediction of life critical diseases has bridged the gap between medical expertise and disease care to a larger extent. Quantitative and objective analysis facilitated by computational intelligence in Biomedical Signal Processing leads to a more reliable, accurate and early diagnostic decision.

This workshop will include the distinguished speakers having expertise in the biomedical and signal processing from different parts of India, where in they will share the research techniques in this field and the probable issues that will be addressed in upcoming times. This will also include an illustration of research works in health related issues using different biomedical signals and images.

Program Schedule:

**DAY 1: July 23, 2016 (Saturday)**
- 9:00-9:30 am Registration
- 9:30-10.00 am Inaugural Session
- 10:00-10.30 am Tea Break
- 10.15-11.45 am Session I – Biomedical Signals, Their Acquisition and Processing
- 11.45-1.15 pm Session II – Biomedical Images, Their Acquisition and Processing
- 1:15 - 2:00 pm Lunch Break
- 2:00-3.30 pm Session III – Demonstration & Tutorial on Biomedical Imaging Processing
- 3.30-4.35 pm Tea Break
- 3.45-5.30 pm Session IV – Demonstration & Tutorial on Biomedical Image Processing

**DAY 2: July 24, 2016 (Sunday)**
- 8.00-10.00 am Session V – Time and Frequency Domain Analysis of Biomedical Signals and Images
- 10.00-10.15 am Session VI – IoTs for Health Care Applications– Case Study
- 10-11.15 am Session VII – Pattern Classification of Electrocardiogram Signals
- 11.45-1.15 pm Lunch Break
- 1:15 - 2:00 pm Session VIII – Demonstration & Tutorial on Time and Frequency Domain Analysis of Biomedical Signals and Images
- 2:00-3.30 pm Session IX – Demonstration / Tutorials on Pattern Classification of Electrocardiogram Signals
- 3.30-4.35 pm Tea Break
- 3.45-5.30 pm Session X – Micro-Robotics and Imaging for Biomedical Applications
- 5.30-6.30 pm Tea Break

**DAY 3: July 25, 2016 (Monday)**
- 8.00-10.00 am Session X – Micro-Robotics and Imaging for Biomedical Applications
- 10.00-10.15 am Tea Break
- 10-11.45 am Session XI – Brain CT-Scan Images for Ischemic Stroke & RBC-WBC Analysis of Blood Cells
- 11.45-1.15 pm Session XII – Demonstration & Tutorials on Microwave Image Analysis
- 1:15 - 2:00 pm Lunch Break
- 2:00-3.30 pm Session XIII – Demonstration and Tutorials on Brain Images
- 3.30-4.35 pm Tea Break
- 4.35-6.35 pm Valedictory Session