



## 1-Week Workshop on

### Medical Signal & Image Processing (MSIP-2018) February 04-10, 2018



*Convenor*  
Prof. K. Pal

*Co-Convenor*  
Prof. S. S. Ray

**Department of  
Biotechnology and Medical Engineering  
National Institute of Technology, Rourkela**

## About the workshop

Human body generates a variety of signals. These signals can be captured by various instruments like ECG machine, respirometer, EEG machine, EMG machine, MRI machine etc. The analysis of the signals help in divulging information about the state of well-being of the persons. The analysis of the signals is achieved by mathematically manipulating the signal, which can help the clinicians in diagnosing the diseases. The workshop will provide the participants with hands-on-training on the signal processing techniques using LabVIEW® software, Orange® software, Rapidminer® and Bios Analyzer software.

## Key learning objectives

### Getting started with LabVIEW

- Programs for signal processing
- Time domain signal analyses
- Joint time-frequency analyses

### Fundamentals of biosignal processing

- Biopotential amplifier hardware designing
- Biosignal acquisition
- Biosignal processing
- Biosignal classification

### Image acquisition and processing

- Hands-on-experiment on Smart Camera
- Image processing techniques in Industries

**Special training module for in-depth data analysis and data representation for research scholars**

## Potential attendees

- Students
- Research scholars
- Young faculty and scientists
- Industry personnel
- Laboratory professionals

## Resource Persons

Prof . K. Pal (M. E., Ph. D.)  
Assistant Professor, NIT Rourkela  
Ex -Research Scientist  
Ryerson University, Toronto, Canada

Prof . S. S. Ray (M.M.S.T., Ph. D.)  
Assistant Professor, NIT Rourkela  
Registered Medical Practitioner

Prof . I. Banerjee (M. Tech., Ph. D.)  
Assistant professor, NIT Rourkela  
Guest Scientist, Max Planck Institute  
of Intelligent system, Stuttgart, Germany

## Address for Correspondence

Prof. K. Pal  
Tel: +91-876-336-6085  
Prof. S. S. Ray  
Tel: +91-824-924-7236  
E-mail: [msip.nitrkl@gmail.com](mailto:msip.nitrkl@gmail.com)  
Department of  
Biotechnology & Medical Engineering,  
National Institute of Technology,  
Rourkela,  
Odisha 769008, India.

## The Institute

National Institute of Technology, Rourkela is an **Institute of National Importance** for technical education established by the Government of India. NIT Rourkela is a prestigious institute with a reputation for excellence in research and education at undergraduate, postgraduate and doctoral levels.

## The Department

The Department of Biotechnology and Medical Engineering was established in 2007. The department is presently offering B. Tech., M. Tech. and Ph. D. degree in Biotechnology and Medical Engineering. The faculty members have diverse research interests and they conduct both basic and applied research in diverse areas like Cell & Molecular Engineering, Tissue Engineering & Biomaterials, Bioprocess Engineering, Environmental & Plant Biotechnology, Biomechanics & Biotransport Engineering, Medical Electronics & Instrumentation etc. The department is having a number of state of art laboratory well equipped for basic and applied research.



## Registration fees

- Personnel from Industry & R&D Organizations: Rs. 10,000/-
- Faculties from Educational Institutions: Rs. 8,000/-
- Research Scholars and Students: Rs. 7,000/-

\*Registration fee includes 20% Institute Overhead Charges.

### Registration fee covers:

Conference Kit, Food (Breakfast, Lunch, Dinner) during the workshop days and accommodation on sharing basis in the institute guest house (subjected to availability).

The registration fees can be paid by sending Demand Draft in favor of “Conference, NIT Rourkela”, payable at Rourkela.

## Registration details

The application form should be filled online using the link given below by December 1, 2017. The selected candidates will be intimated by email on December 10, 2017, who are then required to send the demand draft within 15 days of intimation. A scanned copy of the demand draft is to be sent to the email ID ([msip.nitrkl@gmail.com](mailto:msip.nitrkl@gmail.com)) within 7 days of intimation. The decision of the selection committee is final and will be binding to all the applicants. The registration fee will not be refunded in case of cancellation of registration by the selected candidate.

### Application form for registration:

<https://goo.gl/forms/NS0T1LTr9UICGNdN2>

## Organizing Committee

### Patron:

Prof. A. K. Biswas, Director, NIT Rourkela

### Organizing Committee:

Prof. M. K. Gupta, Head of the Department, (Chairman)

Prof. K. Pal, Convenor

Prof. S. S. Ray, Co-Convenor

Prof. I. Banerjee, Treasurer

Prof. K. Pramanik

Prof. S. Paul

Prof. A. Biswas

Prof. A. Thirugnanam

Prof. B. P. Nayak

Prof. N. Sarkar

Prof. D. Verma

Prof. A. Sarkar

Prof. N. Patra

Prof. P. Balasubramanian

Prof. K. Dutta

## Sponsorship

Silver: Rs. 15000.00

Gold: Rs. 25000.00

Platinum: Rs. 40000.00

Platinum Plus: Rs. 50000.00