**One Week Short Term Course** On

"Biomedical Signal and Image Processing: Contemporary Methods and Applications"

(Under TEQIP-III)

July 29-Aug 02, 2019

## **Course Coordinators:**

Dr. Omkar Singh Dr Shahid Mehraj Shah



## **Organized By**

Department of Electronics and Communication Engineering, National Institute of Technology, Srinagar - 190006, J&K

Website: www.nitsri.ac.in

## **Objectives of Course**

Biomedical signal and Image processing has become a necessary tool to enhance useful The objective of this short term course is to provide theoretical and practical knowledge of the Communication Engineering, M.Tech Degree in (1) fundamental and advanced techniques applied to analysis of medical signals and images. Currently, there is a need to advance the development of computer based diagnostic and monitoring systems Biometrics. which offer fully automated analysis. These Signal/Image Processing, Machine learning, network diagnostic systems can help the physician in making well founded decisions and reduce the subjectivity of manual measurements and decision making process. During this course, the scientists and academicians from reputed institutes will discuss the contemporary methods for Biomedical Signal and image Processing

## About the Institute

National Institute of Technology Srinagar, formerly Regional Engineering College, Srinagar, is a government engineering and research institution, located in Srinagar, Jammu and Kashmir, India. It is among the 31 National Institutes of one Technology (NITs) and as such falls under the aegis of the Ministry of Human Resource Development (MHRD), Govt. of India. The institute took birth way back in 1960 as one of several Regional Engineering Colleges established as part of the 2<sup>nd</sup> Five year plan (1956–61) by the Govt. of India. It is governed by the National Institutes of Technology Act, 2007 which has declared it as an Institute of National Importance.

# About the Department of Electronics & **Communication Engineering**

The Department of Electronics and information hidden in clinical data/ medical images. Communication Engineering was established in 1984 and offers B.Tech Degree in Electronics and Microelectronics (ME) and (2) Information and Communication Technology (ICT). The Department also offers the Doctoral programmes in the field of Communication. Microelectronics. security and VLSI Design. The department has established state-of-art laboratories with sophisticated equipments for undergraduate, post graduate and PhD research work. The department is equipped with contemporary laboratory equipments required for the excellent growth of students. The department has state of art labs including VLSI Lab, Optical fiber communication Lab, Image Processing Lab, Information and Network Security Lab, Biometric Lab and machine learning Lab.

### **Registration Fee & Details**

[Includes: Kit, Daily Refreshments & Lunch]

| Student / Research Scholar**                            | Rs. 1500/- |
|---|------------|
| Faculty* / Scientist                                    | Rs. 3000/- |
| Industry Personnel                                      | Rs. 4000/- |
| <b>**</b> Registration fees 50 % for internal students. |            |
| *: Registration is free for Internal Faculty (from      |            |
| NIT Srinagar). Maximum of 20% candidates                |            |
| (08 participants) can be registed                       |            |
| faculty participants, on first co                       |            |
| (FCFS) basis.   |            |

Payments to be made in the following account:A/C Name:TEQIP-IIIA/C No:0391040100011025Bank Name:J&K BankBank Branch:REC SrinagarIFSC Code:JAKA0RECSGR (0 is 'zero')

- 1. Last date of Registration is 27<sup>th</sup> July 2019.
- 2. The number of seats is limited to 40 (FCFS Basis)
- **3.** *Accommodation* can be arranged in nearby hotels (on payment basis) at standard rates.

The complete registration form should reach by speed post or email latest by July, 27, 2019 at the following address:

Corresponding Address: Course Coordinators

#### Dr. Omkar Singh

Assistant Professor, Department of Electronics and Communication Engineering, National Institute of Technology, Srinagar, J&K-190006 E-mail: omkar.parihar@nitsri.ac.in Contact: 9419279382

#### Dr. Shahid Mehraj Shah

Assistant Professor, Department of Electronics and Communication Engineering, National Institute of Technology, Srinagar, J&K-190006 Email: shahidshah@nitsri.net Contact: 7889519497

## Tentative Topics to be covered

Biomedical Signal Acquisition and analysis Compressive Sensing Wavelet Analysis Adaptive data analysis techniques Speech intelligibility Medical Imaging Adaptive Filtering Heart Rate Variability Analysis Signal/Image processing using Matlab and Python

## **Chief Patron**

Prof. Rakesh Sehgal, Director NIT Srinagar

#### **Patrons**

Dr. Farida Khurshid, HOD, ECE & Prof. M. F. Wani, TEQIP-III Coordinator

#### **Conveners**

Prof. A H Mir, Dean Administration & Dr. Farida Khurshid, HOD, ECE

#### **Organizing Committee**

Prof G M Rather Prof Najeeb-U-Din Dr G R Begh Dr Gausia Qazi Er A A Mir Er A G Mir Dr S A Ahsan Dr Amandeep Singh National Institute of Technology Srinagar J&K-190006

Short Term Course

*On* "Biomedical signal and image processing: contemporary methods and applications"

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#### **Registration Form**

| Name:                                  |
|--|
| Designation:                           |
| Department:                            |
| Organization:                          |
| Address:                               |
|  |
| Tel/Fax:                               |
| Email:                                 |
| Accommodation: Required / Not required |
| Payment Reference No                   |
| Bank Name:                             |
| Amount in Rs                           |
| Dated:                                 |
| Signature with Date:                   |
|  |

#### Sponsorship Certificate

The applicant is hereby sponsored and will be permitted to attend the short term course "Biomedical signal and image processing: contemporary methods and applications", if selected.

Date: .....

Signature and Seal of Sponsoring authority