

Introduction

The goal of Biomedical Engineering branch is to lead happy, healthier and beautiful life. Considering the state of art technology, we intend to have guidance, suggestions and ideas from the renowned expert **Dr. Peter W. Macfarlane, Professor of Electrocardiology** from University of Glasgow, (UK). This will help to mould and orient the research work into an application for the betterment of social health care. SGGSI&T, Nanded is one of the front-runners in this growing inter- and multi-disciplinary field via research work and project work. The workshop will cover the talks by **Prof. Peter W. Macfarlane** on following topics:

- Heart disease - no exemption for India.
- Automated ECG analysis – 50 years on: the challenges that remain.
- Workshop on faulty ECG recordings, abnormal recordings, ECG recording techniques.

Ph.D. Theses completed in BME

- Studies on Electroimpedance and Electromyographic Signals to Assess Noninvasive Early Diagnosis of Knee Osteoarthritis.
- Study and Analysis of RR Time Series Signals in Spinal Cord Injury Patients.
- Theoretical and experimental studies of an amperometric biosensor using PC-based instrumentation system.
- Analysis and interpretation of ECG signals using wavelet transform.
- Estimation of Single Trial Visual Evoked Potentials in Time-Frequency Domains.
- Biomedical Image Analysis (Texture analysis based thesis)
- Studies on biopotentials (EEG related).

Projects undertaken

Projects with an emphasis on biomedical signal and image processing (ECG, EEG, EMG, EOG, EGG, etc.) can be undertaken. A few examples are:

- Automated heart disease diagnosis;
- HRV analysis for Spinal cord injured patients;
- Health, stress and lifestyle monitoring using ECG, EEG, EMG;
- Sports management applications;
- Pediatric and fetal ECG monitoring;
- Diagnosis of muscle decay/fatigue using EMG analysis;
- EMG for diagnosis and management for osteoarthritis;
- Prosthesis using EMG;
- Monitoring health of muscles using EMG;
- Monitoring effect of exercise muscles using EMG;
- Applications of EEG and EMG in rehabilitation engineering;
- Evoked potential (audio and visual) EEG signal processing;
- Epilepsy detection;
- Brain Computer Interface (BCI) using EEG;
- EEG applications for learning disabled (Mentally retarded);
- Diagnosis of various diseases using Biomedical Images (such as mammographic images, malignant tumors, etc.);
- Use of texture analysis for biomedical image processing;
- Medical Image Retrieval for large medical databases;
- Medical image information systems;
- Biomedical applications in VLSI.

REGISTRATION FORM

1. Name
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b. Institute
 3. Mailing Address
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 7. Educational Qualifications
 8. Experience:
 9. Details of reg. Fees DD no.
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- Place Signature of the Applicant

SPONSORSHIP CERTIFICATE

Mr. /Ms

Working in this institute as is hereby sponsored for the course and will be relieved, if selected to attend the course.

Date: Signature of the sponsoring authority
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About SGGSI&T, Nanded

Shri Guru Gobind Singhji (SGGS) Institute of Engineering and Technology, Nanded was established on 17th December 1981. The institute enjoys autonomous status and is a cent percent funded by Government of Maharashtra. Hon. B.N. Kalyani, an eminent industrialist, (heading the Kalyani Group of Companies) is also working as Chairman of the Governing Board of this institute. The Government has also appointed renowned personalities from the business, industry, academics and its senior administrative cadre on the Governing Board. This institute offers eight undergraduate and five post graduation courses in the various streams of engineering and technology. Institute is a university recognized research center.

Core BME Team

Dr. S.T. Hamde

Ph.D. in Biomedical Engineering, IIT Roorkee

Dr. S.S. Gajre

Ph.D. in Biomedical Engineering, IIT Delhi

Dr. S.V. Bonde

Ph.D. in Biomedical Engineering, IIT Bombay

Dr. R.R. Manthalkar

Ph.D. in Texture Analysis, IIT Kharagpur

Dr. Mrs. R.V. Sarwadnya

Ph.D. in Biosensors, IIT Bombay

Others:

Dr. Y.V. Joshi (Ph.D. IITD), Dr. L.M. Waghmare (Ph.D. IIT Roorkee), Dr. R.S. Holambe (Ph.D. IITKgp), Dr. B.M. Patre (Ph.D. IITB), Dr. R.C. Thool (Ph.D. SGGSI Nanded), Dr. S.N. Talbar (Ph.D. SGGSI Nanded), Dr. S.G. Kahalekar (Ph.D. SGGSI Nanded), Dr. D.D. Doye (Ph.D. SGGSI Nanded), Dr. M.B. Kokare (Ph.D. IITKgp), Dr. V.R. Thool (Ph.D. SGGSI Nanded), Dr. A.V. Nandedkar (Ph.D. IITKgp), and many others.

Patrons

Shri. B. N. Kalyani

Chairman, BOG, SGGSI&T, Nanded
C.M.D., Bharat Forge Ltd., Pune

Shri. Kamlesh Pande

Member, BOG, SGGSI&T, Nanded
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Dr. Satish Gore, M.S.(Ortho)

Member, BOG, SGGSI&T, Nanded
Renowned orthopedic surgeon, Pune

Dr. S.R. Kajale

Director, SGGSI&T, Nanded, M.S.

Contacts

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Important Dates:

Workshop: 17th February, 2010

Date for registration: On or before
17th February, 2010

Registration Fees:

Industry/R&D Labs	Rs. 1500.00
Academia/Doctors	Rs. 1000.00
Students	Rs. 500.00

Apply through an email to sthamde@yahoo.com or bmpatre@yahoo.com with the details of DD in favor of "The Director, SGGSI&T, Nanded".

One day Workshop on ECG Analysis and Interpretation

Wednesday, February 17, 2010

Venue

Seminar Hall, CSE Department

Time

10:00 AM to 5:00 PM



Coordinators

Dr. Satish T. Hamde
(Ph. D., IIT Roorkee)

Dr. B. M. Patre
(Ph. D., IIT Bombay)

Resource Person

Prof. Peter W. Macfarlane

Professor of Electrophysiology
University of Glasgow, Scotland, (UK)

Organized by

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