

DISTINGUISHED SPEAKERS

Registration

Registration is free for all participants

(Registration kit, course materials, refreshments will be provided. Free Accommodation may be provided in the Institute Guest House on first come first serve basis and based on the availability)

The filled in registration form should sent through E-mail to:

**Prof. Suchismita Chinara
(Coordinator: *WiSNet-rehab-2016*)**

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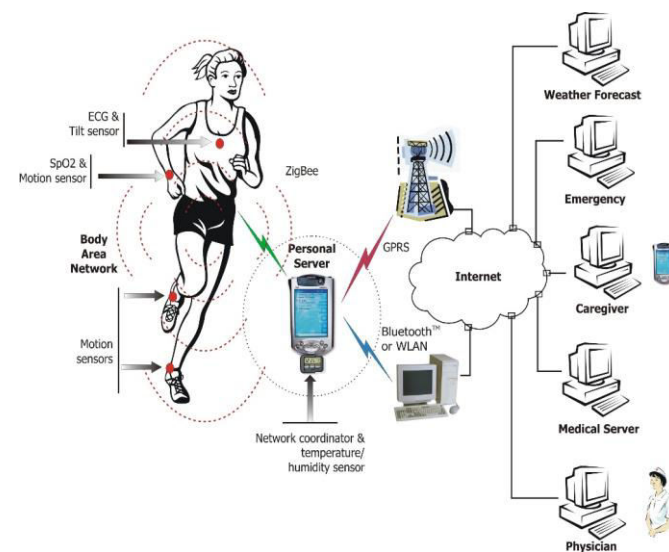
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WHO CAN APPLY:

Faculty members, researchers and practitioners from Computer Science, Communication Engg., Bio medical Engg. and Biomechanical domain can attend the workshop.

ABOUT THE WORKSHOP:

Rehabilitation is a therapy where the patient performs various physical exercises and activities to achieve a physical functioning level that allows him to return to his initial motion capabilities after an accident, a stroke or a surgery. Physical therapists should continuously monitor and rectify patients during rehabilitation to avoid improperly exercising. Continuous supervision of patients during long term rehabilitation therapy increases the load for physical therapists and medical stand cost too much for patients. Sensors have been used in motion tracking where the patient wears several small nodes able to assess human movement without interfering with his natural behaviours. These nodes form a network which unobtrusively gathers information regarding position, motion, direction and physiological state. Researchers from biomedical, biomechanical and computer science communities have been working toward the development of wireless sensor networks that bring a wave of breakthroughs in providing rehabilitation. Indeed, wireless sensor networks have been used in several rehabilitation applications such as stroke rehabilitation, balance training, parkinson's disease and tele-rehabilitation. Furthermore, WSN can be used as a support system to improve the efficiency of the rehabilitation process. For instance, the Ubiquitous Rehabilitation Center uses a WSN to manage all aspects of a rehabilitation center. It allows specialists to assign prescriptions to patients, to configure rehabilitation machines for patient's particular prescription (ie. setting resistance, duration and frequency) and to record patient activity while they are carrying out their prescriptions. The excitement for this technology is motivated by the several benefits associated to long-term monitoring, low cost, rapid deployment, self-organization and flexibility features of Wireless Sensor Networks.



TOPICS

- Need for rehabilitation of orthopaedic patients
- Motion Tracking of the patients
- Current scenario and issues with existing rehabilitation methods
- WSN based design considerations for rehabilitations of orthopaedic patients
- Design of Bio-sensors for rehabilitation
- Communication protocol design for bio-sensors
- Signal processing issues to health science
- Bio-effect of radio transmission
- Design of propagation channel model
- Routing
- Quality of Service

National Institute of Technology

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Important Dates:

Last date for receipt of registration form:

7th October, 2016

Course duration:

22nd – 23rd October, 2016

CORRESPONDENCE

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National Workshop on Wireless Sensor Networks for Rehabilitation of Orthopedic Patients (WiSNet-rehab-2016)

22nd -23rd October, 2016

REGISTRATION FORM

1. Name:
2. Designation:
3. Affiliated to:
4. Address for communication:
5. E-mail:
6. Phone:
7. Accommodation if required:
YES/NO

Signature of candidate:

Date:

Place:

Forwarded through H.o.D / Institute

Organisation:

National Workshop on Wireless Sensor Networks for Rehabilitation of Orthopedic Patients (WiSNet-rehab-2016)

22nd -23rd October, 2016

Coordinator

Prof. Suchismita Chinara
(Dept. of Computer Sc. Engg.)

Co-coordinator

Prof. Sirsendu Sekhar Roy
(Dept. of Bio-Tech & Bio-Med Engg.)



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**Department of Computer Science
Engineering**

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