

# EMBC Workshop Proposal

## Workshop Type (select one):

Full Day Workshop

Half Day Workshop

## Workshop Title:

Point of Care Biosensor System: Principle and Application

## Workshop Organizer Name & Affiliation:

Jinhong Guo. UESTC

## Workshop Organizer/Speaker Name & Affiliation 1:

Hao Yu. SUSTech

## Workshop Organizer/Speaker Name & Affiliation 2:

Benoit Gosselin , Université Laval

## Workshop Organizer/Speaker Name & Affiliation 3:

## Workshop Organizer/Speaker Name & Affiliation 4:

## Workshop Organizer/Speaker Name & Affiliation 5:

## Workshop Organizer/Speaker Name & Affiliation 6:

## Theme (Select one):

- 01. Biomedical Signal Processing
- 02. Biomedical Imaging and Image Processing
- 03. Micro/ Nano-bioengineering; Cellular/ Tissue Engineering & Biomaterials
- 04. Computational Systems & Synthetic Biology; Multiscale modeling
- 05. Cardiovascular and Respiratory Systems Engineering
- 06. Neural and Rehabilitation Engineering
- 07. Biomedical Sensors and Wearable Systems
- 08. Biorobotics and Biomechanics
- 09. Therapeutic & Diagnostic Systems and Technologies
- 10. Biomedical & Health Informatics
- 11. Biomedical Engineering Education and Society
- 12. Translational Engineering for Healthcare Innovation and Commercialization

### Workshop Synopsis— Max 2000 Characters

Currently, the urgent need of proactive health including the point of care biomedical device and the corresponding medical service is undergoing a dramatic growth and going to be tremendously huge in the near future. The development of point of care biomedical sensors are capable of paving the way for the professional medical service since the critical importance of medical data acquisition. After a review of the state of the art, this tutorial will present advanced point of care biosensor system from the working principle to its clinical application. First, we will present the medical market available of the point of care biosensor system. Subsequently, various biomedical sensory systems are illustrated such as the electrochemical sensor, photochemical sensor, ion-sensor, Lateral Flow Immunosensors. How the proactive health system provides the good service for the patients will be generally introduced.