E0247 Aug 3:1

Sensor Networks

Instructor

Rathna G N
Email: rathna@iisc.ac.in

Teaching Assistant

Email:

Department: Department of Electrical Engineering

Course Time: Tue., 3.30-5PM and Wed., 11.30AM-1PM

Lecture venue: B304

Detailed Course Page: http://www.ee.iisc.ac.in/SOI_2017.pdf

Announcements

first class started on 6th Aug 2017

Brief description of the course

Basic concepts and issues, survey of applications of sensor networks, homogeneous and heterogeneous sensor networks, topology control and clustering protocols, routing and transport protocols, access control techniques, location awareness and estimation, security information assurance protocols, data fusion and management techniques, query processing, energy efficiency issues, lifetime optimization, resource management schemes, task allocation methods, clock synchronization algorithms

Prerequisites

none

Syllabus

Basic concepts and issues, survey of applications of sensor networks, homogeneous and heterogeneous sensor networks, topology control and clustering protocols, routing and transport protocols, access control techniques, location awareness and estimation, security information assurance protocols, data fusion and management techniques, query processing, energy efficiency

issues, lifetime optimization, resource management schemes, task allocation methods, clock synchronization algorithms

Course outcomes

Design the applications using sensors and apply the topics used in the course material

Grading policy

25% mid term test

25% presentations

50% mini project

Assignments

presentations with demos based on 2 recent papers in the literature

Resources

Basic concepts and issues, survey of applications of sensor networks, homogeneous and heterogeneous sensor networks, topology control and clustering protocols, routing and transport protocols, access control techniques, location awareness and estimation, security information assurance protocols, data fusion and management techniques, query processing, energy efficiency issues, lifetime optimization, resource management schemes, task allocation methods, clock synchronization algorithms
current literature