

MURPA Seminar Friday 14th October at 9am: Building Large-scale Personalized Mobile Sensing Systems: Challenges and Research Opportunities

Presenter: Dr Sameer Tilak, Cyberinfrastructure Laboratory for Environmental Observing Systems (CLEOS), San Diego Supercomputer Centre

Venue: Seminar Room 135, Building 26 Clayton

Abstract

Effective large scale urban sensing requires the use of mobile sensors and personalized sensing. Mobile sensors (e.g., those mounted on cars or carried by people) can provide spatial sampling diversity not possible with static sensors; for example, a sensor mounted on a car can provide readings of air quality from many locations throughout a day. In addition, personalized sensing provides sampling of phenomena as experienced by users, which allows us to track user experiences and support applications such as personalized medicine. Personalized mobile sensing environments are characterized by sensors that are mobile with intermittent network connectivity and limited power budget. Samples are often taken under suboptimal conditions (e.g., air pollution measured while sensor was in a purse). Thus, these environments introduce a number of challenges related to network connectivity, coverage calibration, and energy efficiency. In this talk we will discuss research challenges and our approach for lowering the barrier for developing large-scale mobile and personalized sensor systems

Bio

Sameer is a Researcher at San Diego Supercomputer Centre, in the Cyberinfrastructure Laboratory for Environmental Observing Systems. He did his PhD at State University of New York at Binghamton, and also studied at Pune Institute of Computer Technology, University of Pune and University of Rochester. He has focussed on Sensor and Data Storage Networks. Other interests are ad-hoc networks, wireless and mobile computing, distributed systems, grid computing, cloud computing.

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