SUM-CPS

Tata Institute of Fundamental Research, Mumbai, January 3, 2013
In Conjunction with ICDCN 2013
Website: http://www.ece.rochester.edu/projects/wcng/sumo/

First International Workshop on Sustainable Monitoring through Cyber-Physical Systems (SuMo-CPS)

Wireless sensor networks (WSNs) have recently provided the right technology for enabling cable free systems for environmental monitoring. These networks of collaborative sensor nodes are easily deployable, can be embedded into structures, placed on the human body, dispersed in water and on-land and, through wireless communications, provide easy data reporting. Such cyber-physical systems may improve healthcare in inaccessible areas and for at-risk patients, enhance the sensory perception of the environment for impaired individuals, detect sources of pollution in a timely manner, monitor the impact of climate change through deployments in forests, oceans and in the atmosphere, among others. Efficient and effective sensor deployments require a close coupling of device design, networking, and expertise related to the physical environment in which the sensor must operate. In this workshop, we will maintain a strong focus on various aspects of environmental conservation and human assistance through WSNs, in line with both the goals of the ICDCN conference, and the growing concerns of society today.

The objective of this workshop is to bring together practitioners and researchers from both academia and industry in order to have a forum for discussion and technical presentations on the emerging algorithms and applications of sensor networks for sustainable monitoring purposes. The focus on cyber-physical applications aims at providing insight into the future of sensor technology, and at identifying possible scenarios that might translate into new directions for research and investments from industry. The focus on the algorithmic aspects of sensor networking aims at overcoming the current issues related to energy and resource management that are necessary to tackle the practical implementation of such systems. Due to the timeliness of the topics, we expect the workshop to be a possible ground of cross-fertilization between academia, industry, and standardization groups. Original contributions are solicited on topics of interest including, but not limited to:

- Energy harvesting
- Wake-up radio technology
- Algorithms and protocols for energy efficient WSNs
- Clinical and medical applications of WSNs
- Environmental monitoring case studies, experiments and results
- Topology construction for WSNs
- Data aggregation and compression in WSNs
- Low computational security
- Data privacy and anonymity
- Large scale sensor testbeds
- Economic case studies for large scale WSN deployments
- Novel applications and analytical frameworks for sensor-assisted cyber physical systems
- Multi-scale modeling, compressive sensing and sparse processing in WSNs

Workshop Chairs:

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Papers should be a maximum of 6 pages, not published elsewhere, and not currently under review by another conference or journal. Please note that all accepted papers will need to have a full registration to the conference (there is no workshop only registration). In addition, no-shows of accepted papers at the workshop will result in those papers NOT being included in the proceedings. Workshop proceedings will be published in ACM Digital Library and some selected papers will be considered for publication in CSI Journal of Computing.

Important Dates:
Paper submission: September 30 Paper Acceptance: November 10 Camera Ready: December 1