UCF DEPARTMENT OF COMPUTER SCIENCE

Fall 2015 Seminar Series

LOCALIZED ALGORITHMS FOR WIRELESS AD HOC / SENSOR NETWORKS

MONDAY NOVEMBER 9, 2015

2:00 PM – HEC 450

With the rapid advances in embedded systems, VLSI, IoT and wireless radio technologies, wireless ad hoc / sensor networks have emerged with an incredible research momentum. Traditionally, a sensor network is modeled as a message-passing graph exhibiting a natural scope of distributed algorithms. However, geometry plays an underlying role in defining the topology, as the deployment of nodes in space, and the communication range of wireless links, usually are subject to geometric constraints. Moreover, the issues of media access, transmission errors and interference aspects are also critical to be represented by the model. These issues change the very definition of distributed algorithms, and a new paradigm of 'Localized Algorithms' has emerged.

In this talk, localized algorithms will be briefly discussed with reference to two important problems in wireless ad hoc / sensor networks-- a) connected dominating set based routing and b) area coverage. We'll conclude with possible directions of research in this area in future.

DR. NABANITA DAS

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Nabanita Das is a Professor in the Advanced Computing and Microelectronics Unit of Indian Statistical Institute, Kolkata, India, since 1986. She received her B. Tech. degree in Electronics Engineering, from University of Calcutta, and M.Tech. and Ph.D in Computer Science from Jadavpur University, Calcutta, India. Her area of interest includes Mobile Ad Hoc Networking, Pervasive Computing, Parallel and Distributed Computing and Multi-Core Computing. Dr. Das acted as the co-Editor of 'Distributed Computing- IWDC 2004' LNCS, Springer, Guest Editor of special issue on 'Resource Management in Mobile Communication Networks' of 'Microprocessors and Microsystems', 2004, Elsevier. She has served in the program committees of many national and international conferences.

She is a senior member of IEEE. She is an active member and served as the Chair of Women in Engineering (WIE) affinity group of IEEE Calcutta section.

Hosted by: Dr. Mainak Chatterjee