

Call for Papers: International Workshop on Theoretical Aspects of Wireless Ad Hoc, Sensor, and Peer-to-Peer Networks

June 11th- 12th, Chicago, Illinois, USA. Sponsored by NSF.

Recent years saw a great amount of research in wireless networks, especially wireless ad hoc networks. These works involve a number of theoretical aspects of computer science, including approximation algorithms, computational geometry, combinatorics, and distributed algorithms. However, there are still many challenges in wireless ad hoc networks. Due to the limited capability of processing power, storage, and energy supply, many conventional algorithms are too complicated to be implemented in wireless ad hoc networks. Some other algorithms did not take advantage of the geometry nature of the wireless networks. Additionally, most of the currently developed algorithms for wireless networks assumed a precise position of each wireless node, which is impossible practically. Majority of the algorithms developed in this area also assume all nodes have uniform transmission range. These algorithms will likely fail when nodes have disparity transmission ranges. Furthermore, the wireless ad hoc networks require efficient distributed algorithms with low computation complexity and low communication complexity. These algorithms are expected to take advantage of the geometry nature of the wireless ad hoc networks. Several fundamental questions should be answered: can we improve the performance of traditional distributed algorithms under wireless ad hoc networks? Does the position information of wireless nodes make difference in algorithms' performance? Much of the existing work in wireless ad hoc networking also assumes that each individual wireless node (possibly owned by selfish users) will follow prescribed protocols without deviation. However, each user may modify the behavior of an algorithm for self-interested reasons. How to achieve desired global system performances when individual nodes are selfish?

We particularly solicit the papers addressing the following issues for wireless, sensor, and P2P networks, but not limited to:

- MAC layer management and protocols;
- Power management;
- Topology Control;
- Network layer management;
- Network control and management;
- Routing protocols;
- Pricing policies in public networks;
- Service Provider;
- Rationality, incentives, microeconomics and self-interests;
- QoS pricing and billing;
- Analysis and simulation protocols

Selected papers will be published in a special issue of ACM **Kluwer Mobile Networks and Applications MONET**.

Workshop Webpage: <http://www.cs.iit.edu/~xli/workshop/>

Important Dates

Manuscript Submission: **April 30th, 2004**

Acceptance Notification: **May 30th, 2004**

Workshop dates: **June 11-12, 2004**

Manuscript Due for invited papers: **June 30th, 2004**

Submission Guidelines

All manuscripts should be not longer than 12 pages using at least 10 fonts, including figures, tables and references. Each manuscript should include the full list of authors with their affiliations, e-mail addresses, and full postal addresses. Submissions also should include an abstract no longer than 300 words, together with a list of up to five keywords or phrases.

No article published in or currently submitted to other journals or books or conferences or workshops can be considered for publication.

The authors should submit the paper in PDF or Postscript format to Xiang-Yang Li at xli@cs.iit.edu according to the publication schedule. The subject of the email should be “Workshop Submission”. If email submission is not possible, then six (6) hard copies of the paper should be sent by the due date to the following address:

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Illinois Institute of Technology
10 West 31st Street
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All submitted papers would be reviewed following the standard procedure.