Call for Papers

A Special Issue of Ad Hoc Networks
On “WIRELESS COMMUNICATION IN CHALLENGED ENVIRONMENTS”

The recent advances in wireless communications and networking have motivated the use of these technologies in environments where no computer has gone before. More specifically, the ubiquitous data gathering, computation, and communication capabilities of tiny sensors motes, microprocessors, and mobile communication devices have recently been exploited in places such as underground mines, tunnels, and soil; underwater environments such as oceans and rivers; the outer space; and locations affected by natural disasters. Wireless communication in these challenged environments is characterized by the direct impact of the physical world environment on the communication and networking performance. Accordingly, the traditional definitions of communication channel, connectivity, network topology, packet route, or message delivery may no longer hold true. To provide the required guarantees for applications in these environments, a fundamental understanding of the environmental impacts on communication as well as the physical layer affects on higher layer protocols is required. Moreover, cross-layer solutions that address the challenges in these environments by incorporating the interactions between the environment and communication performance are beneficial. Consequently, environment-aware solutions that adapt to the changes in their environment can be realized.

This special issue is dedicated to recent advances in communication and networking in challenged environments. Papers describing applications, protocols, analysis models, evaluation methods, and experimental studies are solicited.

Topics of interest include (but are not limited to):
- Network architectures
- Analysis models
- Channel models
- Resiliency, reliability, and robustness
- Communication protocols (transport, routing, MAC, error control, security)
- Cross-layer design and optimization
- Localization solutions
- Deployment scenarios and experiences

in Challenged Environments including:
- Underground ( Mines, tunnels, and soil)
- Underwater
- Space
- Disaster areas
- Urban areas

For more information
www.elsevier.com/computerscience
**About the Ad Hoc Networks**

The Ad Hoc Networks is an international and archival journal providing a publication vehicle for complete coverage of all topics of interest to those involved in ad hoc and sensor networking areas. The Ad Hoc Networks considers original, high quality and unpublished contributions addressing all aspects of ad hoc and sensor networks.

**Submission format**

The submitted papers must be written in English and describe original research which is not published nor currently under review by other journals or conferences. Author guidelines for preparation of manuscript can be found at [www.elsevier.com/locate/adhoc](http://www.elsevier.com/locate/adhoc). For more information, please contact the Editor-in-Chief: Ian F. Akyildiz (adhoc@ece.gatech.edu)

**Submission Guideline**

All manuscripts and any supplementary material should be submitted through Elsevier Editorial System (EES). The authors must select as “Special Issue: Challenged Environments” when they reach the “Article Type” step in the submission process. The EES website is located at: [http://ees.elsevier.com/adhoc/](http://ees.elsevier.com/adhoc/)

**Guide for Authors**

This site will guide you stepwise through the creation and uploading of you article. The guide for Authors can be found on the journal homepage [www.elsevier.com/adhoc](http://www.elsevier.com/adhoc).