



Workshop on Small Satellite Communications CALL FOR PAPER

IEEE International Conference on Wireless for Space and Extreme Environments (WiSEE2018)
December 11-13 2018, Huntsville, AL, USA

Introduction: Small satellite networks can provide a promising and affordable solution for in-space inspection and future complex missions in different areas of remote sensing, earth monitoring, gravity mapping, space weather, finding water resources, navigation, and communications for both civilian and military purposes. While individual small satellites have limited sensing and communication capabilities due to the constraints in their size, mass and power, a network of such small satellites in large constellations or clusters can provide a comparable performance to larger and more costly satellites.

Objective: The goal of this workshop is to bring together researchers in this area to discuss the state-of-the-art achievements and future trends related to small satellites technology in different areas of small satellite communication system design, control within constellation, and enabling of scientific missions.

Topics of Interest: potential topics of Interest include, but are not limited to:

- Inter-satellite communication technologies
- Ground-satellite communications
- Physical layer and routing protocols for inter-satellite communications
- MAC protocols and interference management in small satellite networks
- Cross-layer optimization in inter-satellite communication
- Spectrum management in small satellite communications
- Channel modeling and antenna design for small satellite networks
- Delay tolerant networking
- Software-defined radio communication
- Remote sensing using small satellite networks
- Control and communications in autonomous swarm of small satellites
- Applications of game theory in autonomous small satellite networks
- Data mining in large-scale small satellite networks
- Signal processing/image processing in small satellite networks
- Positioning and localization in small satellite networks
- System Engineering formulation of small satellite networks

Organizers:

Dr. William Edmonson, Langley Professor, North Carolina A&T State University, National Institute of Aerospace, Director, Small Satellite Systems Research Center

Email: william.edmonson@nianet.org

Dr. Fatemeh Afghah, School of Informatics, Computing and Cyber Systems, Northern Arizona University

Email: fatemeh.afghah@nau.edu

Submission Format: Full-length Research Papers (6 pages) and Poster abstracts (3 pages) are accepted.

Submission Deadline: July 1, 2018, **Notification of Acceptance:** August 1, 2018,

Camera Ready Papers due: September 1, 2018.

For guideline and more information regarding the paper submission, please refer to sites.ieee.org/wisec