Many of the wireless technologies used today are based on the efforts initiated by satellite communications researchers four decades ago. Thus the main technology behind the different applications is very similar in both terrestrial and space systems. This is very supportive today, with the ever growing demand for multimedia services, high mobility and global connectivity leading us to a truly transparent interoperability of our flourishing communications infrastructure. Satellite systems have always a key role to play covering this demand for ordinary as well as for emergency situations. This Special Issue of JCN will put together high-quality research articles on recent advances in satellite and space communications for next generation wireless communication networks. The focus is targeted on exploring and discussing new technical breakthrough and applications focusing on all aspects related to satellite and space communications. Articles for this special issue will be solicited through an open call-for-papers to experts in the field from industry and academia. Topics of interest include but are not limited to:

- Air Interface over satellite networks
- Adaptive coding modulation for satellite communication networks
- Fading countermeasures over satellite networks
- Power and bandwidth allocation solutions over satellite networks
- Emerging standards: DVB-S2, DVB-RCS NG, DVB-SH, 3G and beyond, IP over satellite
- Multicarrier techniques for satellite communications
- Applications of multi-user detection techniques to satellite network
- Advanced MAC protocols
- Software radio for satellite communications
- RF design and phase array for satellite communications

- Payload architectures and techniques
  - System and payload co-design paradigms
  - Flexible payloads architectures
  - Enabling payload technologies
  - Advances in active antennas for satellite communications

- Internetworking, architecture, protocols, applications, and standards in satellite networks
  - S-WIMAX: Adaptation of 802.16e for mobile satellite services
  - Performance enhancement proxy (PEP) architectures and solutions
  - Spectrum allocation & standards
  - GoS-oriented solutions for DVB-S2, DVB-RCS, IP over satellite
  - Security in satellite and hybrid networks
  - New protocols for delay tolerant networks
  - Deep-space communications
  - Towards the gigabit/s satellite
  - Convergence and integration among satellite networks, terrestrial networks and space platforms
  - Satellite technology for mobile services
  - Satellite communications and "digital divide" issues

- Control and algorithms for satellite networks
  - Satellite network control and management
  - Control architectures and algorithms for satellite and heterogeneous internetworking
  - Control schemes for resource allocation over satellite channels

- New paradigm in satellite and space communications
  - Quantum communication in space
  - Satellite communication using laser
  - Satellite/terrestrial frequency sharing

Continuing JCN's tradition of fast turnaround together with full peer reviews, a tentative schedule is as follows:

- April 15, 2010: Electronic manuscript (.ps or .pdf) submission to JCN website
- July 15, 2010: Reviews returned to authors with request for changes
- September 30, 2010: Final revised manuscript due
- December 15, 2010: Special Issue published

Dr. Igor Bisio, University of Genoa, Italy, igor@dist.unige.it
Dr. Riccardo De Gaudenzi, European Space Agency, The Netherlands, Riccardo.de.Gaudenzi@esa.int
Dr. Hung Henry Nguyen, The Aerospace Corporation, USA, hung.h.nguyen@aero.org
Prof. Fotini-Niovi Pavlidou, Aristotle University, Greece, niovi@auth.gr
Dr. Takaya Yamazato, Nagoya University, Japan, yamazato@ieee.org

Electronic submissions will be made to the JCN website. Information about submissions is available on the JCN web site, http://jcn.or.kr. Please direct inquiries and intent to submit notifications to any one of the Guest Editors.

JCN is a high-quality bimonthly archival journal, published by the Korea Information and Communications Society with the technical co-sponsorship of the IEEE Communications Society, covering the fields of Communication Theory and Systems, Wireless Communications, and Networks and Services. JCN began publication in March 1999.