



The first International IEEE-AESS Conference in Europe
about Space and Satellite Telecommunications

Centro Congressi Roma Eventi - Fontana di Trevi, Rome - October 2-3-4-5, 2012



Dear Colleague,

We are very pleased to invite you to the ESTEL 2012, the first *International IEEE-AESS Conference in Europe on Space and Satellite TELEcommunications*.

The Conference will be held on October 2-5, 2012 in Rome, Italy at the *Roma Eventi Fontana di Trevi Conference Centre*, in the heart of Rome historical centre.

The 2012 ESTEL Conference ESTEL is the first international one sponsored by:

1. IEEE AESS
2. ESOA (European Satellite Operators Association)
3. ESA (European Space Agency)
4. and SAT Expo (The International Expo-Forum on Space and Advanced Telecommunications)

The 2012 ESTEL Conference aims at providing a multidisciplinary forum for the exchange of ideas in the areas of satellite communications, antennas, navigation systems, integrated satellite systems, sensing and electronic systems engineering, emerging technologies and relative Value added Services& Applications.

The conference will be held in a very attractive and enjoyable location as Centro Congressi "Roma Eventi - Fontana di Trevi" in Rome, with many opportunities for networking, candid exchange of ideas and the building of a strong sense of community. A diverse assembly of researchers, engineers and scientists will be invited to present their ideas and discuss new results, providing a unique opportunity for attendees to view a variety of interesting and innovative technologies in one location.

Giuliano Berretta, (Eutelsat CEO of the Administrative Board and ESOA Chairman Emeritus), is the General Chair of the conference.

The Prof. Ramje Prasad (CTIF Director) is the TPC Chair of the event while the Prof.

Marina Ruggieri (IEEE AESS President) is the TCP Vice Chair.

Cosimo Stallo (IEEE AESS GOLD Chair) is the Organization Committee Chair.

Invited papers and tutorial talks from international experts will be presented in key topical areas. Original manuscripts are solicited in research areas related to satellite communications, advanced integrated systems, navigation technologies, including, but not limited to the following macro areas:

Macro-Area #1: Communication and Navigation Technologies

- Ground and Space Antenna Technologies and Systems
- Modulation and Coding Schemes
- Synchronization, Equalization and Channel Estimation
- Channel Modeling for Satellite Communications
- MIMO Communications for Satellites
- Interference Detection and Mitigation Techniques
- DVB and Broadband Access Technologies
- IP over Satellite and QoS Support
- Transport Protocols over Satellite
- Onboard Switching and Processing Technologies
- Delay Tolerant Networking (DTN) over Satellite
- Radio Resource Management and Packet Scheduling
- Power control, Hand-Over Issues and Call Admission Control
- Cross-layer Design
- Software Defined Radio Technology
- Ground Segment Architecture and Terminals
- Next Generation Mobile, Broadband and Broadcast Satellite Systems
- Multi-Gigabit Communications
- New Constellation Design
- Emerging Standardizations and Issues

- Advanced Circuits and Devices
- Security Issues of Satellite Communications
- Precise Positioning
- Urban Personal& Vehicular Navigation
- High Performance Inertial Sensors
- GNSS Augmentation Systems
- Terrestrial Radio- navigation& RF-Positioning
- UWB technology

Macro-Area #2: Integrated Satellite Systems and Emerging Technologies

- Integration between Telecommunication, Navigation and Earth Observation Systems
- IP over Satellite and Heterogeneous Networks
- Emergency Communications and Services
- Maritime Communication Technologies
- Infrastructure and Network Management
- Convergence with Terrestrial, Wireless Access and Sensor Networks
- Cooperative/distributed network Architectures
- Quantum Satellite Communications
- Convergence with Optical Networks
- Hybrid Satellite& Terrestrial Networking
- Space Exploration and Interplanetary Internet
- Unmanned Aerial Vehicles (UAVs)
- Aeronautical Satellite Communications
- Swarm Sensor Networks

Macro-Area # 3: Value added Services& Applications for Improving the Quality of Life (QoL) (Health, Security and Energy)

- Mobile Satellite Services
- Real-time Multimedia Streaming, Broadcast/Multicasting
- Cybersecurity
- Communication Protocols and Services for Space Networks
- Homeland Security
- Artificial Intelligence and Expert Systems for e-Healthcare Cyber Attacks
- Satellite-based Remote eHealth
- Military and Dual Use Applications
- Satellite-based Disaster Recovery
- Interoperability of Disaster Responders Communication Systems
- Satellite-based Power Grids Monitoring and Control
- Satellite-based Weather Forecast
- Satellite-based Earthquake Surveillance
- Satellite-based Environmental Surveillance
- Tele Healthcare, Medical Applications and Information Systems
- Smart Homes and Assisted Living
- Mobile Technologies for Healthcare Applications
- Standards for e-Healthcare
- Unmanned Search and Rescue
- Wearable and Implantable Wireless Sensors for Healthcare
- Wireless Body Area Networks (BANs) and In-Body Communications
- ICT for Intelligent Transportation Systems
- ICT Impact on Climate Changes and Green Communications

Macro-Area #4: Future Satellite Communication Systems

- Next Generation Mobile, Broadband and Broadcast Satellite Systems
- Channel Modeling for EHF Satellite Communications

- Millimeter Wave Technology and Devices
- Multi-Gigabit Communications
- New Constellation Design

Macro-Area #5: Space Missions, Systems and Architectures and Launchers

- Accelerating Evolution – Spacecraft Propulsion Technology and Mission Design Technologies for Safe Lunar Landing
- System and Technology Challenges for Landing on the Earth, Moon and Mars
- Radiation Issues and Modeling for Deep Space Missions
- Mission Design for Spacecraft Formations
- Future Space and Earth Science Missions
- Space Debris Mitigation and Removal
- Missions&Technologies for In Situ Exploration& Sample Return
- Launchers
- Air Vehicle Flight Controls
- UAV Systems& Autonomy
- Multi-Agent Technologies for Aerospace
- PHM for Aircraft and Propulsion Program Applications

Main deadlines

- * **Workshop and Panel Proposals 31/12/2011**
- * **Tutorial Proposals 15/01/2012**
- * **Abstract Submission 01/02/2012**
- * **Notification of Abstract Acceptance 01/04/2012**
- * **Draft Manuscript Submission 15/05/2012**
- * **Notification of Acceptance 20/06/2012**
- * **Final Manuscript Submission 20/07/2012**



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If you have any questions, do not hesitate to contact Cosimo Stallo (e-mail: cosimo.stallo@uniroma2.it or info@estelconference.org).

Cosimo Stallo

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