



The first IEEE-AESS European Conference  
on Satellite TELEcommunications

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



*Advanced Integrated Services and  
Applications, Architectures and Devices*



in the collaboration with **ESA**

In the heart of Rome,  
in the heart of Europe

Conference Record #: 19294

# Preliminary ESTEL Website



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## ABOUT US

**Estel Conference** is the first European conference for IEEE-AESS dedicated to telecommunications via satellite for "Advanced Services and Applications, Architectures, Technologies and Terminals". The meeting welcomes the most important international experts in the sectors of satellite communications, antennas, navigation systems, integrated satellite systems, sensing and electronic systems engineering, emerging technologies and relative Value added Services & Applications.

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## COMMITTEES

The committees for the ESTEL Conference include managers, teachers, and professionalists from the most prestigious companies, institutional bodies, and international universities as well as experts in the communication technologies, satellite systems and aerospace science. The committees will assess the papers of researchers, engineers, and scientists who will be invited to present their ideas on the areas regarding satellite communications, advanced integrated systems, and navigation technologies..

[Read More](#)

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# Highlights - About

It will be the first international Conference  
sponsored:

**1) IEEE – AESS**

in partnership with

**2) ESOA (European Satellite Operators Association)**

**3) ESA (European Space Agency)**

**4) and SAT Expo**

**(The International Expo-Forum  
on Space and Advanced Telecommunications)**

# Main topics of the conferences / macroareas:

## Macroarea #1: Communication 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
- 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
- Emerging Standardizations and Issues
- Advanced Circuits and Devices - Security Issues of Satellite Communications
- Onboard Switching and Processing Technologies

# Main topics of the conferences / macroareas:

## Macroarea #2: Integrated Satellite Systems and Emerging Technologies

- Integration between Telecommunication
- Navigation and Earth Observation Systems
- IP over Satellite and Heterogeneous Networks
- Emergency 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 (Air Traffic Control, Aeronautical Operational Control, Air Passenger Communications)

# Main topics of the conferences / macroareas:

## Macroarea # 3: Value added Services & Applications for Improving the Quality of Life (QoL)

- 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



# Main topics of the conferences / macroareas:

## Macroarea # 3: Value added Services & Applications for Improving the Quality of Life (QoL)

- Mobile Satellite Services
- Real-time Multimedia Streaming, Broadcast/Multicasting
- Satellite-based Cybersecurity
- Communication Protocols and Services for Space Networks
- Intelligent Transportation Systems
- Homeland Security
- Satellite-based Remote eHealth
- Military and Dual Use Applications
- Satellite-based Disaster Recovery
- Satellite-based Power Grids Monitoring and Control
- Space-Based Solar Power Transfer
- Satellite-based Weather Forecast
- Satellite-based Earthquake Surveillance
- Satellite-based Environmental Surveillance
- 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

# Main topics of the conferences / macroareas:

## Macroarea # 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

## Macroarea # 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



# ESTEL Conf Actors:

## IEEE-AESS in collaboration with ESOA, ESA and SAT Expo:

### **IEEE (The Institute of Electrical and Electronics Engineers – [www.ieee.org](http://www.ieee.org))**

IEEE is the world's largest professional association dedicated to advancing technological innovation and excellence for the benefit of humanity. IEEE and its members inspire a global community through IEEE's highly cited publications, conferences, technology standards, and professional and educational activities.

### **AESS (The Aerospace, Electronic and Systems Society – [www.ieee-aess.org/main/](http://www.ieee-aess.org/main/))**

The AESS offers to its members the extraordinary opportunity to become deeply connected with the three pillars of the Aerospace, Electronic and Defence Sector: Industry, Institutions and Research Centers. It's one of the 38 societies of IEEE.

### **ESA (European Space Agency- [www.esa.int](http://www.esa.int) )**

The ESA is Europe's gateway to space. Its mission is to shape the development of Europe's space capability and ensure that investment in space continues to deliver benefits to the citizens of Europe and the world.

### **ESOA (The European Satellite Operators Association - [www.esoa.net/](http://www.esoa.net/))**

ESOA is a non-profit European organisation established with the objective of serving and promoting the common interests of European satellite operators. The Association is the reference point for the European satellite operators industry and today represents the interests of 10 satellite operators who deliver information communication services across the globe. All European satellite operators are full members of ESOA, as you can see on <http://www.esoa.net/Members.htm>

# Highlights – when and where

- **When:** 2-3-4-5 October 2012
- **Duration:** 4 days from Tuesday to Friday
- **Location:** Roma – Centro Congressi Fontana di Trevi (in the heart of historic center of Rome, one of the most beautiful areas in Rome). It's one of the biggest Conferences Center located in the center of Rome
- **Spaces selected:** 1 Conference room for 350 persons, 3 meetings rooms - each for 100 people, 1 open area reserved for catering service, 1 open area for expo (desks/booths of sponsors and exhibiting companies)



# The Committees (1)

4 Main Committees are foreseen:

## GENERAL CHAIR

Giuliano Berretta (ESOA Emeritus Chairman)

## 1) ADVISORY COMMITTEE

Chairman

ESA Member (Giuseppe Morsillo -Head of ESA Director General's Policy Office)

**MEMBERS:** Representatives from AESS (Marina Ruggieri, Mark Davis,...), ESA (Riccardo De Gaudenzi (Head of RF Payload Systems Division- ESA ESTEC), ...) and ESOA

# The Committees (2)

## 2) TECHNICAL COMMITTEE

<b>CHAIRMAN</b>	<b>Enrico Del Re (CNIT)</b>
<b>MEMBERS</b> - Representatives from:	
- Space agencies	ESOA ESA , ASI
- Universities	ISAE, Danish GPS Center, Aalborg University, University of Firenze, Research Center of Rome University “La Sapienza” – Research Center of Rome University Tor Vergata - CRAS - CNR - Nottingham Scientific - Stanford University, CNIT, CTIF, GeorgiaTech
- Associations	IEEE, AESS
- European Industries and associations of the Aerospace market	ESOA, AIAD, AIPAS, ASAS, AFCEA, ASSOCIATION OF ITALIAN TECHNOLOGICAL DISTRICTS, FUB, EUROPEAN AEROSPACE DISTRICTS, EUTELSAT, FINMECCANICA GROUP, SKYLOGIC
- Institutions	European Commission - Energy and Transports Commission - CEE Italian Representative – Italian Prime Minister’s Office – The Italian Defense Minister

# The Committees (3)

## 3) ORGANIZING COMMITTEE

Members from AESS (Cosimo Stallo, Judy Scharmann), ESOA Fulvio Sansone), Aldo L'Imperio (Pentastudio External Relations) - Ilaria Pivato (Promospace of SATExpo Events Manager).

## 4) FINANCE COMMITTEE

<b>Treasure</b>	<b>Cosimo Stallo (AESS)</b>
Members from ESOA (Aarti Holla-Miani), AESS (Judy Scharmann, George Dean) and ESA members	

# Important Dates

**Workshop and Panel Proposals: 31 December 2011**

**Tutorial Proposals: 15 January 2012**

**Abstract Submission: 1 February 2012**

**Notification of Abstract Acceptance: 1 April 2012**

**Draft Manuscript Submission: 15 May 2012**

**Notification of Acceptance: 20 June 2012**

**Final Manuscript Submission: 20 July 2012**