

**IEEE AESS Board of Governors**  
**Fall Meeting**  
**October 4-5, 2013**

**Orlando, FL**

**Space Panel Report**

**Chair: Cosimo Stallo**  
**Vice-Chair: Marina Ruggieri**

The relevant international activities of the Space Systems Panel are:

1. Activities related to the co-chairing of Track 2 Space Missions, Systems and Architecture of the 2013 IEEE Aerospace Conference that will take place in Big Sky in March 2014.
2. Activities related to the role of Editor of Space Systems of the AES Transactions and for the Systems Magazine.
3. Organisation of training and thesis activities of students at the University of Roma Tor Vergata in the field of space systems.
4. The 10<sup>th</sup> edition of the Master Course in “Advanced Satellite and Communications Systems” at the University of Roma Tor Vergata is in progress, while we are preparing the 11<sup>th</sup> edition of that master.
5. The 7<sup>th</sup> edition of the on line Master Course in “Satellite Communications and Navigation Systems” organized by University of Rome Tor Vergata and Scuola IaD (**Istruzione a Distanza**) is in progress, while the 8<sup>th</sup> edition is already foreseen.
6. **IEEE Division IX for Quality of Life** meeting was held on Friday, June 7, 2013 at ESA-ESRIN, Frascati (Roma), Italy. The ESA Event was very interesting itself and many hints for the Quality of Life concept have been pointed out and will be surely introduced in our work on the above topic. Coming to the Division IX meeting, a group of co-authors of the concept have been created. Most of them have physically participated to the meeting. Others have sent a presentation and some other have expressed the wish of being kept informed about the progress because they wish to participate to the activity. Some of the co-authors are Presidents or have been sent by the Presidents of Div IX S/C's, some other are members of Div IX S/C's, with roles therein, who took the honour (and the responsibility) to represent the S/C.

7. Coordination and Organization of scientific Activities (both propagation and communication experiments) on Q/V band channel of TDP#5 (Technology Demonstration Payload) that is embarked on Alphasat, Europe's largest and most sophisticated telecommunications satellite. Alphasat was launched into its planned orbit on July 25 2013 from Kourou, French Guiana. The Ariane 5 ECA rocket, operated by Arianespace, took off at 19:54 GMT, 21:54 CEST and delivered Alphasat into the target geostationary transfer orbit about 28 minutes later. Alphasat's signal has been picked up by an Inmarsat ground station in Beijing as expected at 20:38 GMT (22:38 CEST), confirming that the satellite is at the predicted location, powered up and transmitting. Alphasat is also carrying four ESA technology demonstration payloads: an environmental and radiation testing sensor from Efacec (Portugal), the Aldo Paraboni Q/V-band experiment (TDP#5) from Thales Alenia Space (Italy) and Space Engineering (Italy), a startracker from Jena-Optronik (Germany) and a laser communication terminal from TESAT (Germany), provided by the DLR German Aerospace Center.
8. Activities related to the development and organization of *MetroAerospace* Conference with IEEE I&M Society. The event will be held in Benevento (Italy) on 29-30 May 2014.
9. An invited lecture was held by Daniele Mortari (from Aerospace Engineering Department of Texas A&M University, U.S.) at University of Rome Tor Vergata on July 4 2013 on *Visual-based Attitude and Position Estimation using Moon or Earth Images*.
10. The seminar was organized by AESS GOLD, AFCEA Chapter Rome and Master of Science on Advanced Navigation and Communication Satellite Systems of Tor Vergata University.
11. Activities related to the development of the second edition of the IEEE AESS ESTEL Conference that will take place at ESRIN (European Space Agency) premises in Frascati (Rome, Italy) on October 2014.
12. We have decided to postpone the second edition of the ESTEL Conference to October 2014 in order to organize for the first time a space conference in two different places: at ESRIN (European Space Agency) premises in Frascati (Rome) and at new ASI (Italian Space Agency) ones (6 km from ESRIN site). The new ASI building has an auditorium of 700 people. Our idea is to host the first day of the event there and to move the sessions to ESRIN premises. After this BoG, we will decide the final dates of the event (probably at October - Second Quarter) with the support of both organizing secretaries of ASI and ESA.
13. Activities related to the development and organization of the second IEEE AESS Summer Workshop **on Integrated Satellite Communication and Navigation Systems (ISaCoNaS): "Advanced Services and Applications, Architectures and Terminals To improve Quality of Life"** which will be held in Nicotel Pineto in Castellaneta Marina, Apulia, Italy on July, 24-28 2014. This course is focused on systems, technologies and relative services associated to Earth Observation and Earth Science Applications, Advanced Satellite Communications and Navigation, Swarm Intelligence and Advanced Modulation and Coding Techniques which can significantly improve the Quality of Life (<http://isaconas-workshop.uniroma2.it/>).

14. Activities related to projects, publications and teaching in the space system related topics.
15. Development and publication of several papers about space systems in conference proceedings and journals.
16. Organization together with IEEE GOLD Committee of a *special Panel focused on Student and GOLD Activities* that will be held during the IEEE Section Congress 2014 Amsterdam, Netherlands, at the Rai Convention Center, from 22 to 24 August 2014.

**Prepared on October 1, 2013 by Cosimo Stallo & Marina Ruggieri**