

CONFERENCE PROGRAM

Monday, October 16

Lobby

08:00 - 09:00

Registration

09:00 - 17:30

Tergeste Room

Colloquium: High Throughput Satellite (HTS) Broadband Opportunities: Orbits, Architectures, Spectrum, Interference and Markets

Chair: Hector Fenech, Director Future Satellite Systems, Eutelsat, France and Nader S. Alagha, Senior Telecommunications Systems Engineer, ESA, The Netherlands

PROGRAM

09:00 - 09:10

Colloquium Opening

Co-Chairs: Hector Fenech, Eutelsat, France and Nader S. Alagha, ESA, The Netherlands

09:10 - 10:30

Session 1: What is a HTS System?

Co-Chairs: Hector Fenech, Eutelsat, France and Nader S. Alagha, ESA, The Netherlands

09:10 - What pushed us into HTS Systems?

Hector Fenech, Eutelsat, France

09:30 - What is the Current Status of HTS?

Marc Agnew, ViaSat, USA

09:50 - What are the Challenges?

Glyn Thomas, Airbus, United Kingdom

10:10 - Q&A

10:30 - 11:00 - Coffee Break

11:00 - 12:40

Session 2: GEO? LEO? 5G?

Co-Chairs: Hector Fenech, Eutelsat, France and Nader S. Alagha, ESA, The Netherlands

11:00 - Why a GEO HTS System?

Peter Garland, MDA Corp., Canada

11:20 - Why are LEO Constellations Appearing Now?

Tony Azzarelli, OneWeb, United Kingdom

11:40 - Can 5G Enhance the Satellite Offer?

Ana Perez-Neira, Universitat Politecnica de Catalunya, Spain

12:00 - How Can Space and Terrestrial Networks Complement Each Other?

Alex Holvoet, LeoSat, the Netherlands

12:20 - Q&A

12:40 - 13:40 - Lunch Break

13:40 - 15:20

Session 3: Satellite System Architectures

Co-Chairs: Hector Fenech, Eutelsat, France and Nader S. Alagha, ESA, The Netherlands

13:40 - What Are the Current HTS Architectures? (GEO)
Sonya Amos, Eutelsat, France

14:00 - What Are the Current HTS Architectures? (LEO)
Didier Le Boulch, Thales Alenia Space, France

14:20 - What Are the Tendencies in the Networks?
Joel Grotz, SES Engineering, Luxembourg

14:40 - What Are the Tendencies for the Terminals?
Thierry Abraham, Satixfy, Israel

15:00 - Q&A

15:20 – 15:50 - Coffee Break

15:50 – 17:30

Session 4: Is There Space for Everybody? Commercial? Spectrum?

Co-Chairs: Hector Fenech, Eutelsat, France and Nader S. Alagha, ESA, The Netherlands

15:50 - Can the Spectrum Be Shared Between the Systems?
Wladimir Bocquet, Eutelsat, France

16:10 - Can So Many Systems Work Together, Technically?
Damien Roques, ESA/ECSAT, United Kingdom

16:30 - What Are the Differences in the Business Cases for GEO and LEO?
Rajeev Gopal, Hughes Network Systems, USA

16:50 - What Are the benefits for the End Users?
James Hinds, Airbus, United Kingdom

17:10 - Q&A

20:00 - 22:30

Joint Conference Chairs Dinner (by Invitation)

Tuesday, October 17

08:00 - 08:30	Lobby Registration
08:30 - 08:40	Tergeste Room Opening Session: Welcome <i>Chair: Richard T. Gedney and Marco Lisi</i> - Richard T. Gedney, Consultant, USA (23rd Ka and Broadband Communications Conference Co-Chair) - Marco Lisi, ESA, The Netherlands (35th AIAA ICSSC Co-Chair)
08:40 - 09:15	Tergeste Room Opening Session: Keynote <i>Chair: Badri Younes, NASA HQ, USA</i> Introduction by Denise Ponchack, NASA HQ, USA Keynote Speaker: - Badri Younes, Deputy Associate Administrator, SCan, NASA HQ, USA The future of NASA's Space Communications
09:40 - 10:30	Tergeste Room Round Table: Commercial Space Applications: Transformation, Fusion and Competition <i>Chair: Peter Garland, MDA Corp., Canada</i> The rapid technology revolution, large-scale services integration, new launch options, the LEO and GEO constellations competition and the integration of markets are driving and pushing toward a big transformation in satellite systems. The Panel will discuss these new challenges. Moderator: Peter Garland, MDA Corp., Canada Panelists: - Badri Younes, NASA HQ, USA - Marco Lisi, ESA, The Netherlands - Marc Agnew, ViaSat, USA - Naoto Kadowaki, NICT, Japan - Denise Ponchak, NASA, USA
10:30 - 11:00	Coffee Break
11:00 - 13:00	Tergeste Room Plenary Panel 1: Optical Technology and Systems <i>Chair: Pete Vrotsos, ZIN Technologies, USA</i> Space-based free-space optical communications is a concept that has been around since the invention of lasers in the 1960's. In the last few years there has been an impressive amount of activity to demonstrate and launch satellites that carry on-board optical technology. These optical links are being utilized not only for inter-satellite links, but for space-ground links where gigabit data rates are a big enough draw to overcome the large propagation losses they can encounter in the atmosphere and additional pointing requirements. This plenary panel will discuss the state of the art of optical technologies and the optical systems in play today. Moderator: Pete Vrotsos, ZIN Technologies, USA

Panelists:

- Hughes Boulnois, Airbus, Germany
Globalisation of Space Based Laser Communication
- Don Cornwell, NASA, USA
NASA's Optical Communications Program for 2018 and Beyond
- Eva Gonzalez, Inmarsat, United Kingdom
Inmarsat's view on Optical Communications in Space
- Harald Hauschildt, ESA ARTES, The Netherlands
ESA's ScyLight Programme on Optical Communications and Space Based Quantum Cryptography
- David Mitlyng, BridgeSAT, USA
BridgeSat's View of the Market and Technology for Optical Systems
- Sandro Scalise, DLR, Germany
DLR's Optical Communications Program for 2018 and beyond

13:00 - 14:30

Lunch Break

14:30 - 16:10

Room A

ICSSC 1: HTS and Multi-Beam Systems I

Chair: Nader S. Alagha, ESA, The Netherlands

#2757923 - A Ka-band High Throughput Satellite (HTS) System Spot Beam Deployment Procedure

Liping Ai, George Washington University - United States

Hermann Helgert, George Washington University - United States

#2760473 - Geometric Statistics Based Modeling of Dual Polarized Satellite Mobile MIMO Channel

Mingchuan Yang, Harbin Institute of Technology, China - China

Chen Ma, Communication Research Center, Harbin In - China

Jingchao Wang, Institute of China Electronic System En - China

#2760593 - On the use of dummy frames for receiver synchronization in a DVB-S2/S2X beam hopping system

Guy Lesthievant, CNES - France

Hugo MERIC, French Space Agency (CNES) - France

#2789892 - Joint Precoding and Spreading in the Forward Downlink of Multi Spot-Beam Satellite Communication System

Abdulkareem Karasuwa, University of South Wales - United Kingdom

Ifiok Otung, University of South Wales - United Kingdom

14:30 - 15:50

Room B

Ka 1: Q/V Communication Experiments & Technologies I

Chair: Juan Rivera Castro, ESA, the Netherlands and Giorgia Parca, ASI, Italy

#75 - Propagation Challenges in VHTS

Hector Fenech, Eutelsat - France

Viphakone Soumpholphakdy, Eutelsat SA - France

Antonin Hirsch, Eutelsat SA - France

Sonya Amos, Eutelsat SA - France

#91 - Q/V-band feeder links and flexible bandwidth assignment in future very high throughput satellite (VHTS) communication systems

Fabrizio Massaro, Eutelsat - France

Fabrizio Massaro, Eutelsat - France

Viphakone Soumpholphakdy, Eutelsat - France

Daniele Finocchiaro, Eutelsat - France

Guillaume Bigel, Eutelsat - France
Michael Bergmann, Eutelsat - France
Antonio Arcidiacono, Eutelsat - France
Roberto Vitalone, Eutelsat - France

#25 - Aeronautical link designs for satellite systems at extremely high frequencies

Barry Evans, University of Surrey - United Kingdom
Daniel Arapoglou, ESA - Holland
Argyrios Kyrgiazos, University of Surrey - United Kingdom
Nicolas Jeannin, ONERA - France

#103 - RF Technologies for the Ground Segment of future Q/V band Satellite Systems

Giandomenico Amendola, CNIT - Italy
Giuseppe Codispoti, ASI - Italy
Savvas Kosmopoulos, Heriot Watt University - United Kingdom
Francesco Greco, CNIT - Italy
George Goussetis, Heriott Watt University - UK
Jose Garcia-Perez, Heriot Watt University - United Kingdom
Roberto Eleuteri, Skytech - Italy
Roberta Campo, Eutelsat - France
Luigi Boccia, CNIT - Italy

Room C

14:30 - 15:50

ICSSC 2: High Data Rate Architectures and Bandwidth Efficient Schemes I

Chair: Tom Butash, Innovative Aerospace IS, USA

#2807884 - Factors and Trade-Offs in Bandwidth Efficient Modulation and Coding Scheme Design

Ifiok Otung, University of South Wales - United Kingdom

#2756432 - APSK Transmission Experiments over 12GHz-band Satellite Channel Compared TWTA and SSPA

Masaaki Kojima, NHK - Japan
Masafumi Nagasaka, NHK Science & Technology Research Labora - Japan
Yuki Koizumi, NHK Science & Technology Research Labora - Japan
Susumu Nakazawa, NHK Science & Technology Research Labora - Japan
Atsushi Iwasaki, NHK Science & Technology Research Labora - Japan
Yoichi Suzuki, NHK Science & Technology Research Labora - Japan
Kyoichi Saito, NHK Science & Technology Research Labora - Japan
Shoji Tanaka, NHK Science & Technology Research Labora - Japan

#2760596 - Unified Satellite and Terrestrial ACM Design

Farbod Kayhan, University of Luxembourg - Luxembourg
Alireza Haqiqatnejad, University of Luxembourg - Luxembourg

#2760824 - Verification of phase and frequency modulation for software-defined radio baseband systems using field data

Moses Mwakyanjala, Lulea University of Technology - Sweden
M Emami, Luleå University of Technology - Sweden
Jaap van de Beek, Luleå University of Technology - Sweden

Room D

14:30 - 16:10

Ka 2: HTS On-Board Processing, Payload Architectures and Technologies I

Chair: Alessandro Le Pera, Eutelsat, France

#127 - On-Board Regenerative Processor for HTS Ground Segment optimization

Alessandro Le Pera, Eutelsat - France

#67 - Taking the digital domain to Ka-Band with a choice of reliability grades.

Nicolas Chantier, Teledyne e2v - France

Romain Pilard, Teledyne e2v - France

#63 - A Reconfigurable Hybrid Digital Processor for dual use satellite missions

Giuseppe TOMASICCHIO, Thales Alenia Space Italia - Italy

Gaetano Pastore, Thales Alenia Space -

Guglielmo LULLI, Thales Alenia Space -

Giacinto LOSQUADRO, Thales Alenia Space -

#71 - Dream Processor

David Anderson, SEAKR Engineering - United States

David Anderson, SEAKR Engineering Inc - United States

#118 - On the Application of Advanced Commercial Off the Shelf Technology in Future Flexible High Capacity Payloads

Glyn Thomas, Airbus - United Kingdom

Charles Bloomfield, Airbus - UK

Stephen Brown, Airbus -

14:30 - 16:10

Room E

15th BroadSky Workshop: One More Asset for the 5th Generation

Chair: Naoto Kadowaki, NICT, Japan

The new wave is coming to satellite communications world with Super HTS and Super LEO Constellations. At the same time, terrestrial mobile communications are moving into 5th Generation (5G). 5G will provide various kinds of communication capabilities by users' requirements, such as very high throughput, very low latency, very high density of terminals, and so on. Though satellite communications seldom appear in discussions of 5G, it is included in the concept of 5G. Satellite communications can provide some unique advantages to the 5G environment.

PROGRAM

14:30- 14:40

Opening Remarks

Naoto Kadowaki, NICT, Japan

14:40- 15:10

The Network Effect, 5G and Satellite Communications

Bruce R. Elbert, Application Technology Strategy, LLC, USA

15:10- 15:40

Role and Expectations of satellite communication in 5G

Eiji Okamoto, Nagoya Institute of Technology, Japan

15:40- 16:10

Telespazios View about GNSS and 5G Integration

Marco Brancati, Telespazio, Italy

16:10 - 16:30

Coffee Break

16:30 - 18:10

Room A

ICSSC 3: HTS and Multi-Beam Systems II

Chair: Liping Ai, George Washington University, USA and Amane Miura, NICT, Japan

#2807834 - Distributed Precoding Systems in Multi-Gateway Multibeam Satellites

Carlos Mosquera, University of Vigo - Spain

Tom Ram, University of Vigo - Spain

#2759010 - Mutual Information Analysis of Frequency Packing Schemes in Multi-Beam Satellite Systems

Joan Bas, CTTC - Spain

Andrea Modenini, ESA - Netherlands

Johannes Ebert, Joanneum Institute - Austria

Marius Caus, CTTC - Spain

Ana Armada, Universidad Carlos III - Spain

Ana Perez, CTTC - Spain

#2760058 - Adjacent Beams Resource Sharing to Serve Hot Spots

Nader Alagha, European Space Agency - Netherlands

#2760764 - Optical Feeder Links Study towards Future Generation MEO VHTS Systems

Alberto Mengali, SnT - University of Luxembourg - Luxembourg

Charilaos Kourogorgas, National Technical University of Athens - Greece

Nikos Lyras, National Technical University of Athens - Greece

Bhavani Shankar Mysore R, SnT - University of Luxembourg - Luxembourg

Athanasios Panagopoulos, National Technical University of Athens - Greece

Konstantinos Liolis, SES S.A. - Luxembourg

#2770044 - Future Ku-Band Mobility Satellites

christopher mclain, Panasonic Avionics Corporation - United States

janet king, Panasonic Avionics Corporation - United States

Room B

16:30 - 17:50

Ka 3: Q/V Communication Experiments & Technologies II

Chair: Tommaso Rossi, University of Rome Tor Vergata, Italy and Giuseppe Codispoti, ASI, Italy

#76 - Aldo Paraboni Mission on board Alphasat. How technology demonstrators and scientific activities pave the way for commercial SatCom Q/V-Band missions

Juan Rivera, European Space Agency - Netherlands

Antonio Martellucci, European Space Agency - Netherlands

#43 - Q/V band satellite channel prediction techniques: performance evaluation based on Alphasat Aldo Paraboni P/L experimental data

Tommaso Rossi, Università di Roma Tor Vergata - Italy

Marina Ruggieri, CTIF - Tor Vergata University - Italy

Giorgia Parca, Italian Space Agency - Italy

Fabio Maggio, CTIF - Tor Vergata University - Italy

Craig Hibberd, INMARSAT - UK

Mauro De Sanctis, CTIF - Tor Vergata University - Italy

Giuseppe Codispoti, Italian Space Agency - Italy

Cristina Togni, INMARSAT - UK

#45 - Operational results of up-link power control for Q/V band satellite ground station

Michael Schmidt, Joanneum Research - Austria

Johannes Ebert, Joanneum Research - Austria

Eveline Greschitz, Joanneum Research - Austria

Juan Castro, ESA/ ESTEC - Netherlands

#88 - QV-LIFT project: using the Q/V band Aldo Paraboni demonstration payload for validating future satellite systems

Fabrizio Massaro, Eutelsat - France

Roberto Nebuloni, IEIIT/CNR - Italy

George Goussetis, Heriot Watt University - UK
Jose Garcia-Perez, Heriot Watt University - UK
Michael Bergmann, Eutelsat - France
Giandomenico Amendola, CNIT - Italy
Fabrizio Massaro, Eutelsat - France
Carlo Riva, CNIT - Italy

16:30 - 18:10

Room C

ICSSC 4: High Data Rate Architectures and Bandwidth Efficient Schemes II

Chair: Farbod Kayhan, University of Luxembourg, Luxembourg

#2760533 - Autonomous Bandwidth Allocation Scheme for Satellite Transponder Shared by Multiple Systems

Daisuke Goto, NTT - Japan
Fumihito Yamashita, NTT - Japan
Jun-ichi Abe, NTT - Japan
Naoki Kita, NTT - Japan

#2769951 - Optimized non-orthogonal multiplexing in Peak Power Limited Channels

Nader Alagha, European Space Agency - Netherlands
Farbod Kayhan, University of Luxembourg - Luxembourg
Guido Montorsi, Politecnico di Torino - Italy

#2761398 - On the Development and Application of High Data Rate Architecture (HiDRA) in Future Space Networks

Alan Hylton, NASA - United States
Daniel Raible, NASA Glenn Research Center - United States
Gilbert Clark, NASA Glenn Research Center - United States

#2769860 - Beam Hopping – a Flexible Satellite Communication System for Mobility

Sunil Panthi, Panasonic Avionics Corporation - United States
Christopher McLain, Panasonic Avionics Corporation - United States

#2811887 - High Data Rate and Bandwidth Efficient Designs for Satellite Communication Systems

Rajeev Gopal, Hughes Network Systems, LLC - United States
J Corrigan, Hughes Network Systems - United States
C. Ravishankar, Hughes Network Systems - United States

16:30 - 18:10

Room D

Ka 4: Earth Observation

Chair: Barry Evans, University of Surrey, United Kingdom

#29 - Earth Resource Satellite downlink and ACM Loop Performance at EHF Bands

Barry Evans, University of Surrey - United Kingdom
Argyrios Kyrgiazos, University of Surrey - United Kingdom
Pantelis-Daniel Arapoglou, ESA ESTEC - Netherlands
Nicolas Jeannin, Onera - FR
Adebenga Awoseyila, University of Surrey - United Kingdom

#38 - Commercial Ka-Band Multi-Swath-SAR Satellite MS3 for Coastal Monitoring and Border Control

Hans Braun, RST Radar Systemtechnik AG - Switzerland

#108 - Low-Cost Multi-Channel Transceiver For Hosted Payloads

Claudio Campa, Space Engineering SpA - Italy
Davide Silvi, Space Engineering SpA - Italy

Francis Pasquet, Airbus DS - France
Ignacio Sanchez, ESA - Netherlands
Annick Bournat, Eutelsat - France
Bernd Hespeler, Tesat Spacecom GmbH - Germany

#109 - Digital Transformation in the space technology domain : from global connectivity to data analytics

Massimo Comparini, Telespazio / E-Geos - Italy

#24 - Meteosat Third Generation : Mission Data Acquisition Ground Stations Performances

Frederic Jaillot, eumetsat - Germany
Marco Certelli, Telespazio - Italy
Gilles Garnier, Eumetsat - Germany

16:30 - 18:10

Room E

15th BroadSky Workshop: One More Asset for the 5th Generation (Contd)

Chair: Naoto Kadowaki, NICT, Japan

PROGRAM (Contd)

16:30- 17:00

Effort toward SatCom and 5G in SES (TBD)
Ray Sperber, SES, Luxembourg

17:00- 17:30

Interactions Between RF and Optical Space Communications Within the Context of 5G
Barry A. Matsumori, BRIDGE SAT, USA

17:30- 18:00

Satixfys Technology: Building Blocks for Low Cost High Performance Satellite Systems
Thierry Abraham, Satixfy, Israel

Closing

Naoto Kadowaki, NICT, Japan

19:00 - 21:00

Joint Conference Welcome Cocktail Reception

Wednesday, October 18

Lobby

08:00 - 08:30

Registration

08:30 - 10:30

Tergeste Room

Plenary Panel 2: New Markets Emerging from Aviation and Autonomy

Chair: Marco Lisi, ESA, The Netherlands

Rapid new uses of airspace coupled with recent advances in autonomy will change the nature of how people live and work. The growth of the civilian drone services (Unmanned or Remotely Piloted Aircraft Systems, UAS, RPAS) took market analysts totally by surprise. Coupled with the tremendous research taking place in autonomy and its applications to self-driving cars and drone operations could cause an exciting new opportunity for satellites. Come hear what is happening in these growth fields.

Moderator: Marco Lisi, ESA, The Netherlands

Panelists:

- Paul Bosman, EUROCONTROL, Belgium
Delivering Ka-band Satellite Solutions for the Real World of Aviation
- Marco Brancati, Telespazio, Italy
- Paolo Burzigotti, ESA, The Netherlands
- Gian-Gherardo Calini, GSA-EU, Czech Republic
- David Cooley, Inmarsat, United Kingdom
Delivering Ka-band satellite solutions for the real world of Aviation

Room E

09:00 - 10:30

3rd General Assembly Aldo Paraboni Experimenters Group

Chair: Carlo Riva, Polytechnic of Milan, Italy

10:30 - 11:00

Coffee Break

Room A

11:00 - 12:20

ICSSC 5: LEO Satellite Technologies

Chair: Ifiok Otung, University of South Wales, United Kingdom and Naoto Kadowaki, NICT, Japan

#2760753 - Networking Small Satellites In LEO via the LinkStar & -STX3 radios: Architecture And Test Results

Andrew Santangelo, sci_Zone, Inc. - United States

#2760784 - VHF Data Exchange System overview and the new Norsat-2 LEO satellite initial test results

Hans Haugli, Space Norway - Norway

Lars Løge, Statsat - Norway

Torkild Eriksen, FFI - Norway

Stig Christiansen, Kongsberg Seatex - Norway

Frode Storesund, Kongsberg Seatex - Norway

Lars Bråten, FFI - Norway

Anders Bjørnevik, Kongsberg Seatex - Norway

#2760755 - LinkStar-X, An Integrated Flight Computer and S-/X-Band Software Defined Radio System For CubeSats In LEO and Deep Space

Andrew Santangelo, sci_Zone, Inc. - United States

#2760985 - Design of Power, Propulsion, and Thermal Sub Systems for a 3U CubeSat Measuring Earth's Radiation Imbalance

Sam Dakka, Sheffield Hallam University - United Kingdom

Jack Claricoats, Sheffield Hallam University - United Kingdom

11:00 - 12:20

Room B

Ka 5: HTS Systems

Chair: Tom Butash, Innovative Aerospace IS, USA

#83 - On conceptual design of bandwidth-on-demand high throughput satellite communications system technology

Amane Miura, NICT - Japan

Shinichi Yamamoto, NICT - Japan

Hiromitsu Wakana, NICT - Japan

Takashi Takahashi, NICT - Japan

Mitsugu Okawa, NICT - Japan

Kazunori Okada, NICT - Japan

Maki Akioka, NICT - Japan

Naoko Yoshimura, NICT - Japan

#114 - High Throughput Satellite System Utilizing Multiport Amplifiers for Enhanced Flexibility.

Anton Weaver-Madsen, Space Systems Loral - United States

Ghislain Turgeon, SSL - USA

Kevin Klesenski, SSL - USA

Vijaya Gallagher, SSL - USA

Sun-Liang Liang, SSL - USA

Anton Weaver-Madsen, SSL - USA

#98 - Progress in developing Q/V capability for SatCom application: E2E System and On-board payload issues for capacity enhancement

Alessandro Pisano, ThalesAleniaSpace-Italia - Italy

Rodolfo Mura, Thales Alenia Space - Italy

Francesca Finocchiaro, Thales Alenia Space - Italy

Paolo Conforto, Thales Alenia Space - Italy

#110 - Dimensioning VHTS Feeder Link Solutions for the short to mid-term An Operator s perspective

Guillaume Marrakchi, Inmarsat - United Kingdom

Guillaume Marrakchi, Inmarsat - United Kingdom

Eva Gonzalez, Inmarsat - United Kingdom

Olaf Rostbakken, Inmarsat - United Kingdom

11:00 - 12:20

Room C

ICSSC 6: Propagation

Chair: Emilio Matricciani, Politecnico di Milano, Italy

#2753084 - Direction Dependence Factor in Site Diversity Design for Kanto Area, Japan

Peeramed Chodkaveekityada, KMITL - Thailand

#2760627 - The NEFOCAST project: Quantitative precipitation estimation based on interactive satellite terminals

Antonio Petrolino, MBI - Italy

Filippo Giannetti, University of Pisa - Italy

Marco Moretti, University of Pisa - Italy

Elisa Adirosi, Consorzio Nazionale Interuniversitario p - Italy

Luca Baldini, Consorzio Nazionale Interuniversitario p - Italy
Ruggero Reggiannini, University of Pisa - Italy
Alessandro Mazza, CNR-Istituto di Biometeorologia (IBIMET) - Italy
Andrea Antonini, Consorzio LaMMA - Italy
Antonio Colicelli, University of Pisa - Italy
Marco Moretti, University of Pisa - Italy
Filippo Giannetti, University of Pisa - Italy
Ruggero Reggiannini, University of Pisa - Italy
Luca Baldini, Consorzio Nazionale Interuniversitario p - Italy
Elisa Adirosi, Consorzio Nazionale Interuniversitario p - Italy
Andrea Antonini, Consorzio LaMMA - Italy
Alessandro Mazza, CNR-Istituto di Biometeorologia (IBIMET) - Italy
Antonio Colicelli, University of Pisa - Italy

Room D

11:00 - 12:20

Ka 6: Components I

Chair: Hampton Chan, SSL, USA

#28 - Linear Power at Q, V, and W Band with Advanced Linearizer Technology

Robert Gray, Linearizer Technology Inc. - United States
Allen Katz, College of New Jersey - United States
Roger Dorval, Linearizer Technology Inc - United States

#36 - KALOS and DEVAQ projects aimed at the development of innovative Ka to V band components for V/Ka forward and Ka/Q return repeaters

Francesco Vitulli, Thales Alenia Space Italia - Italy
Maria Russo, Thales Alenia Space Italia - Italia
Marziale Feudale, Thales Alenia Space Italia - Italia
Franco Diaferia, Thales Alenia Space Italia - Italy
Alessandro Barigelli, Thales Alenia Space Italia - Italia
Andrea Suriani, Thales Alenia Space Italia - Italia
Antonino Massari, Thales Alenia Space Italia - Italia

#37 - Broadband Butler Matrix Solutions with Flat Amplitude Characteristics for HTS Multiport Power Amplifiers (MPAs)

Uwe Rosenberg, Mge-Microwave - Germany
Thomas Sieverding, Mician Global Engineering GbR - Germany
Peter Krauss, Mician Global Engineering GbR - Germany
Petronilo Iglesias, ESTEC - Netherlands
Ralf Beyer, Mician Global Engineering GbR - Germany

#40 - Solid State Power Amplifiers based on GaN and GaAs MMIC Technologies for Future Space-Based Communications and Radar Applications

Naresh Deo, QuinStar Technology - United States
Mark Koker, QuinStar Technology - USA
Mary Hanners, QuinStar Technology - USA

12:20 - 14:00

Lunch Break and AIAA Aerospace Communications Award & Acceptance Speech

Room A

14:00 - 15:20

ICSSC 7: Emerging Satellite Architectures

Chair: Fun Hu, University of Bradford, UK

#2760072 - Convergent Architectures for Multi-Orbit Satellite Communications

Rajeev Gopal, Hughes Network Systems, LLC - United States

#2760120 - Concept Design for Engineering Test Satellite-9 of Japan

Kentaro Nishi, Japan Aerospace Exploration Agency(JAXA) - Japan

Satoru Ozawa, JAXA - Japan

Tsutomu Fukatsu, JAXA - Japan

Yasushi Hatooka, JAXA - Japan

Tadahiko Sano, JAXA - Japan

Kunitoshi Nishijo, JAXA - Japan

Fuyuhiko Otani, Mitsubishi Electric Corporation Kamakura - Japan

Tatsuo Kohama, Mitsubishi Electric Corporation Kamakura - Japan

#2754596 - Architecting a Satellite Communications System using Experience-based Heuristics

Bruce Elbert, Application Tech Strategy, LLC - United States

#2811939 - On-Orbit Assembly Applications of GEO Robotic Servicing Using DARPA RSGS System

Gordon Roesler, DARPA - United States

Room B

Ka 7: Protocols

Chair: Mario Blanco, The Mitre, USA

14:00 - 15:40

#23 - Nonlinear transmission performance comparison of 64APSK coded modulation with 12-GHz satellite transponder characteristics

Yoichi Suzuki, NHK - Japan

Shoji Tanaka, NHK - Japan

Masaaki Kojima, NHK - Japan

Yuki Koizumi, NHK - Japan

Kyoichi Saito, NHK - Japan

#49 - Coverage Extension via Side-Lobe Transmission in MEO Satellite System

Ahmad Gharanjik, University of Luxembourg - Luxembourg

Bhavani Shankar, University of Luxembourg - Luxembourg

Ashok Rao, O3b Networks - United States

Bjron Ottersten, University of Luxembourg - Luxembourg

Jaroslav Kmiecik, O3b Networks - Netherlands

#59 - System level modeling of beam hopping for multi-spot beam satellite systems

Jani Puttonen, Magister Solutions Ltd - Finland

Janne Kurjenniemi, Magister Solutions Ltd. - Finland

Lauri Sormunen, Magister Solutions Ltd. - Finland

#60 - Aeronautical mobility model for multi-spot beam satellite systems

Jani Puttonen, Magister Solutions Ltd - Finland

Janne Kurjenniemi, Magister Solutions Ltd. - Finland

Lauri Sormunen, Magister Solutions Ltd. - Finland

#112 - Application of DVB-S2X Super-Framing for Beam-hopping Systems

Christian Rohde, Fraunhofer IIS - Germany

Rainer Wansch, Fraunhofer IIS - Germany

Hector Fenech, EUTELSAT - France

Gerhard Mocker, WORK Microwave GmbH - Germany

Eros Feltrin, EUTELSAT - France

Sonya Amos, EUTELSAT - France

14:00 - 15:20

Room C

ICSSC 8: Satellite Payloads
Chair: Peter Garland, MDA, Canada

#2760655 - High Speed Onboard Processing and digital Payload Architectures and Technologies
 Stephen MacAnlis, Boeing - United States

#2789045 - Group Delay Considerations for Future Flexible Payloads
 Glyn Thomas, Airbus - United Kingdom

#2760794 - Can Commercial Satellites Satisfy Military-Like Requirements?
 Hector Fenech, Eutelsat - France
 Sonya Amos, Eutelsat SA - France
 Eric Moltzau, Eutelsat America Corp - United States
 Willy Guilleux, Eutelsat SA - France

#2760948 - PAYLOAD PERFORMANCE OF THIRD GENERATION TDRS AND FUTURE SERVICES
 Marco Toral, NASA - United States

14:00 - 15:20

Room D

Ka 8: Components II
Chair: Tony Stajcer, Honeywell, Canada

#46 - Rational Choice of HPAs for Satellite Uplink
 Mike Cascone, Communications & Power Industries - United States

#105 - Solving Early Adopter Q/V Power Amplifier Requirements
 Carter Armstrong, L3 Electron Devices - United States
 Mike Sweeney, L3 Electron Devices - United States

#106 - High Power V/W-Band Power Amplifiers Enabling HTS Communications
 Carter Armstrong, L3 Electron Devices - United States
 Mike Sweeney, L3 Electron Devices - United States

#31 - Peltier device for cooling telecom LNA
 Paolo Panfili, Thales Alenia Space Italia SpA - Italy
 Francesco Vitulli, Thales Alenia Space - Italy
 Alessandro Barigelli, Thales Alenia Space - Italy
 Luca Celotti, Sonaca Space GmbH - Germany
 Bianca Cefalo, Sonaca Space GmbH - Germany
 Malgorzata Solyga, Sonaca Space GmbH - Germany
 Joao Neto, Active Space Technologies SA - Portugal
 Alexandre Ribeiro, Active Space Technologies SA - Portugal

14:00 - 15:40

Room E

3rd General Assembly Aldo Paraboni Experimenters Group
Chair: Carlo Riva, Polytechnic of Milan, Italy

15:40 - 16:10

Coffee Break

16:10 - 17:50

Room A

Ka 9: Special Topics
Chair: Arduino Patacchini, ARPASAT, France

#81 - INTEGRATED 5G SATELLITE-TERRESTRIAL SYSTEMS: USE CASES FOR ROAD SAFETY AND AUTONOMOUS SHIPS

Marko Hoyhtya, VTT Technical Research Centre of Finland - Finland
Sami Ruponen, VTT Technical Research Centre - Finland
Jukka Makela, VTT Technical Research Centre - Finland
Pertti Jarvensivu, VTT Technical Research Centre - Finland
Tiia Ojanpera, VTT Technical Research Centre - Finland

#53 - Survey on the On-Board Technical Solutions to Manage Interferences in the Commercial Satellite Telecommunication Market

Vincenzo Schena, Thales Alenia Space Italia - Italy
Daniele Petrolati, European Space Agency (ESA) - Netherlands
Alberto Pandolfi, Thales Alenia Space Italia - Italy
Alessia Miglietta, Thales Alenia Space Italia - Italy
Carla Marrone, Thales Alenia Space Italia - Italy
Giacinto Losquadro, Thales Alenia Space Italia - Italy

#120 - The role of the new constellations of satellites systems in 5G

Cristiano Monti, Telespazio - Italy
Alessandro Caranci, Telespazio - Italy
Marco Brancati, Telespazio - Italy
Romeo Giuliano, Guglielmo Marconi University - Italy
Franco Mazzenga, Rome University Tor Vergata - Italy
Francesco Vatalaro, Rome University Tor Vergata - Italy
Alessandro Vizzari, Rome University Tor Vergata - Italy

#2811961 - SESAR Exploratory Research SAPIENTProject Overview

Roberto Winkler, Thales Alenia Space Italia - Italy
Giovanni Stea, University of Pisa - Italy
Stefano La Barbera, Thales Alenia Space Italia - Italy
Daniele Finocchi, Thales Alenia Space Italia - Italy
Gianluca Dini, University of Pisa - Italy
Jacopo Capolicchio, Thales Alenia Space Italia - Italy
Antonio Viridis, University of Pisa - Italy

#2811959 - SAPIENT-Simulator Modelling and Architecture

Roberto Winkler, Thales Alenia Space Italia - Italy
Stefano La Barbera, Thales Alenia Space - Italy
Antonio Viridis, University of Pisa - Italy
Giovanni , University of Pisa - Italy

Room B

16:10 - 17:50

Ka 10: Ground Equipment I

Chair: Richard T. Gedney, Consultant, USA

#124 - Space Situation Awareness & Space Surveillance & Tracking: How to improve Italian institutional capabilities relying on national industry competences

Marco Brancati, Telespazio - Italy
Giovanni Mineo, Telespazio - Italy
Giuseppe Matarazzo, Telespazio - Italy

#44 - Multiple system overlay on the satellite transponder with Direct Spectrum Division Transmission adapter

Junichi Abe, NTT Corporation - Japan
Katsuhiko Yamanaka, NTT Corporation - Japan
Yuichi Sagawa, NTT Corporation - Japan
Naoki Kita, NTT Corporation - Japan

Hisayoshi Kano, NTT Corporation - Japan
Daisuke Goto, NTT Corporation - Japan
Jun-ichi Abe, NTT Corporation - Japan

#95 - Beam Hopping - System Design Considerations

Avi Freedman, SatixFy - Israel
Doron Rainish, SatixFy Ltd. - Israel
Doron Elinav, SatixFy Ltd. - israel

#107 - Space Communication Transportable Platform C

George Haddad, NASA GRC - United States
Tom Tanger , OAI - USA
Bryan Schoenholz, NASA GRC - United States
David Pleva, Peerless Technologies - United States
Connor Nam, NASA GRC - United States

#85 - Operational Control Technologies for Flexible Payload in High Throughput Satellites: Required Task, System Model, and Resource Assignment

Yuma Abe, NICT - Japan
Amane Miura, NICT - Japan
Mitsugu Ohkawa, NICT - Japan
Kazunori Okada, NICT - Japan
Morio Toyoshima, NICT - Japan

Room C

16:10 - 17:50

Ka 11: HTS Onboard Processing, Payload Architectures and Technologies II

Chair: Peter Garland, MDA, Canada

#42 - Dynamic Resource Allocation based on Short Range Probabilistic Weather Forecasts

Isabelle Dahman, Onera - France
Nicolas Jeannin, CNES - France
Bouchra Benammar, CNES - France
Philippe Arbogast, MeteoFrance - France

#2811962 - A Robust Phase Estimation Technique for Coherent Detection of Phase-Modulated Signals in Stressed Environments

Mario Blanco, Mitre Corp. - United States

#128 - An overview of multicarrier predistortion technologies and associated throughput gain for an actual hardware implementation

Dieter Duyck, Newtec CY - Belgium
Bhavani Shankar, University of Luxembourg - Luxembourg
Alberto Mengali, University of Luxembourg - Luxembourg
Konstantinos Liolis, SES Techcom - Luxembourg
Cedric Le Guern, Airbus D&S - France
Stefano Cioni, ESA - ESA
Boris Tiomela Jou, Airbus D&S - France

#64 - MODELS FOR WIDEBAND NONLINEARITIES IN SATCOM PAYLOADS RECEIVER CHANNELS AND THEIR PARALLELISM

Giuseppe TOMASICCHIO, Thales Alenia Space Italia - Italy
Guglielmo Lulli, Thales Alenia Space - Italy

#129 - A more accurate gain metric to assess predistortion technologies

Dieter Duyck, Newtec CY - Belgium
Bhavani Shankar, University of Luxembourg - Luxembourg

Alberto Mengali, University of Luxembourg - Luxembourg
Joel Grotz, SES - Luxembourg
Stefano Cioni, ESA - Netherlands

Room D

16:10 - 17:50

Ka 12: Optical Communications

Chair: Naoto Kadowaki, NICT, Japan

#32 - Infrared Satellite Communication Comparison, with Diversity

Paul Christopher, PFC Associates - United States

#41 - A proposition of holographic reception in free-space optical communications

Hiroki Yamashita, Tokai University - Japan

Yoshihisa Takayama, Tokai University - Japan

Yasuyuki Ichihashi, NICT - Japan

Koki Wakunami, NICT - Japan

Kenji Yamamoto, NICT - Japan

#51 - Alphasat TDP1: Optical inter-satellite and feeder links

Daniel Troendle, TESAT Spacecom - Germany

Karen Saucke, Tesat-Spacecom - Germany

Matthias Motzigemba, Tesat-Spacecom - Germany

Rolf Meyer, German Aerospace Center (DLR) - Germany

Patricia Martin Pimentel, Tesat-Spacecom - Germany

Michael Lutzer, German Aerospace Center (DLR) - Germany

Nils Hoepcke, Tesat-Spacecom - Germany

Frank Heine, Tesat-Spacecom - Germany

Edoardo Benzi, ESA ESTEC - The Netherlands

#77 - The Laser Communications Relay Demonstration Experiment Program

David Israel, NASA/GSFC - United States

John Moores, MIT LL - USA

Scott Merritt, NASA/GSFC - USA

Bernard Edwards, NASA/GSFC - United States

Sabino Piazzolla, JPL - USA

#84 - Laser Communication Systems for Airborne, Stratospheric and LEO Constellations

Sven Muencheberg, ViaLight Communications GmbH - Germany

Michael Soutullo, ViaLight Space - USA

Kevin Shortt, ViaLight Communications - Germany

Sven Muencheberg, ViaLight Communications - Germany

Markus Knapek, ViaLight Communications - Germany

Joachim Horwath, ViaLight Communications - Germany

16:10 - 17:50

Room E

3rd General Assembly Aldo Paraboni Experimenters Group

Chair: Carlo Riva, Polytechnic of Milan, Italy

20:30 - 23:00

Joint Conference Dinner

08:30 - 09:30

Room A

ICSSC 9: Integrated Telecom Systems

Chair: Denise Ponchak, NASA, USA

#2759266 - Integration of a Ka-Band Front-End Components Using a Copper Core Printed Circuit Board

Brian Curran, Fraunhofer - IZM - Germany

Jacob Reyes, Fraunhofer - IZM - Germany

#2760732 - Soft Frequency Reuse Scheme based Frequency Sharing in Satellite Terrestrial Integrated Mobile Communication System

Mingchuan Yang, Harbin Institute of Technology, China - China

Xinye Shao, Communication Research Center, Harbin In - China

Shujing Zhang, Communication Research Center, Harbin In - China

Xiaofeng Liu, Communication Research Center, Harbin In - China

#2811821 - Validating CRRM for Aeronautical Communications Using a Formal Description Technique

F. Hu, University of Bradford - United Kingdom

J. Li, University of Bradford - United Kingdom

P. Pillai, Oxford Brookes University - United Kingdom

B.S. Ayo, University of Bradford - United Kingdom

08:30 - 10:10

Room B

Ka 13: Ground Equipment II

Chair: Avi Freedman, Satixfy, Israel

#2807885 - A DUAL-MODE SYMBOL TIMING RECOVERY FOR DVB-RCS2 STANDARD

Pansoo Kim, ETRI - Korea, South

Deock-Gil Oh, ETRI - Korea, South

#54 - OpenSAND : an open source SATCOM Emulator

Emmanuel Dubois, CNES - France

Patrick Gelard, CNES - France

Jean-Baptiste Dupe, CNES - France

Aurelien Delrieu, Viveris Technologies - France

Cedric Baudoin, Thales Alenia Space -

Fabrice Arnal, Thales Alenia Space - France

Nicolas Kuhn, CNES - France

David Pradas, Viveris Technologies - France

#113 - Self Organizing Networks as a Model for Management of Satellite Networks with Flexible Payloads

Mike Patullo, VT iDirect Canada - Canada

#123 - SSPA: How to improve TV uplink capabilities through a technological transfer from ground to space services

Marco Brancati, Telespazio - Italy

Massimo Bertolotti, Sky Italia - Italy

Mauro Sollazzo, Telespazio - Italy

08:30 - 10:10

Room C

Ka 14: Propagation I

Chair: Carlo Riva, Politecnico di Milano, Italy

#116 - DESIGN OF A COMBINED BEACON RECEIVER AND DIGITAL RADIOMETER FOR 40 GHZ PROPAGATION MEASUREMENTS AT THE MADRID DEEP SPACE COMMUNICATIONS COMPLEX

James Nessel, NASA - United States

Michael Zemba, NASA Glenn Research Center -

David Morabito, NASA Jet Propulsion Laboratory - USA

#22 - Characterization of the space correlation function of the Ka and Q/V band tropospheric propagation channel to predict site diversity for HTS systems

Laurent Castanet, ONERA - France

Laurent Feral, UPS - France

Gaetan Fayon, ONERA - France

#57 - Radiometer-derived slant path attenuations and frequency scaling at Alphasat and W-band frequencies

Felix Cuervo Gonzalez, JOANNEUM RESEARCH - DIGITAL - Austria

Michael Schoenhuber, Joanneum Research - Austria

Juan Rivera Castro, European Space Agency - The Netherlands

Verena Mitterauer, Joanneum Research - Austria

Antonio Martellucci, European Space Agency - The Netherlands

#74 - Time Diversity and Linear Combining Gains Obtainable During Rain At Ka Band In The Alphasat Slant Path At Spino d

Emilio Matricciani, Politecnico di Milano - Italy

Roberto Nebuloni, CNR-IEIIT - Italy

Mario Mauri, CNR-IEIIT - Italy

Lorenzo Luini, Politecnico di Milano & IEIIT - Italy

Carlo Riva, Politecnico di Milano & IEIIT - Italy

#90 - INVESTIGATION OF LONG-TERM STATISTICS AND DYNAMICS OF IN-EXCESS ATTENUATION AT Q/V BANDS

Charilaos Kourogorgas, RAL Space - United Kingdom

Spiros Ventouras, RAL Space - UK

Apostolos Papafragkakis, NTUA - Greece

Athanasios Panagopoulos, NTUA - Greece

Room D

Ka 15: Small Satellites I

Chair: Giacinto Losquadro, Thales Alenia Space, Italy

#27 - SAPERE SAFE Mission analysis & design of a compact constellation for risk emergency applications with integrated data from SAR&Optical sensors

Andrea Perrera, Thales Alenia Space Italia - Italy

Andrea Pietropaolo, Thales Alenia Space Italia - Italy

Luca Nardecchia, Thales Alenia Space Italia - Italy

Vanessa Mastroddi, Thales Alenia Space Italia - Italy

#61 - Small Sat Mission for Maritime Surveillance, based on SAR, VDES/AIS and COMINT/ELINT Integrated Solutions

Giuseppe TOMASICCHIO, Thales Alenia Space Italia - Italy

Antonio Ornatelli, Thales Alenia Space Italia - Italy

Giacinto Losquadro, Thales Alenia Space Italia - Italy

08:30 - 09:50

Marco La Ferla, Thales Alenia Space Italia - Italy

Paolo Conforto, Thales Alenia Space Italia - Italy

#94 - Small Sat MicroSAR Missions complementing operating Earth Observation System

Andrea Ferrera, Thales Alenia Space Italia - Italy

Ignazio Rana, Thales Alenia Space Italia - Italia

Stefano Federici, Thales Alenia Space Italia - Italia

Alessandro Cricenti, Thales Alenia Space Italia - Italia

Diego Calabrese, Thales Alenia Space Italia - Italia

Davide Rizzato, Thales Alenia Space Italia - Italia

10:10 - 10:40

Coffee Break

Room A

10:40 - 11:40

ICSSC 10: Transmitter Systems

Chair: Nafiz Karabudak, Lockheed Martin, USA

#2760785 - Development of the satellite circuit-terminating equipment SYS-U

Izumi Urata, NTT Access Network Service Systems Lab. - Japan

Yuichi Sagawa, NTT Access Network Service Systems Labor - Japan

Hisayoshi Kano, NTT Access Network Service Systems Labor - Japan

Keishin Yano, NTT Access Network Service Systems Labor - Japan

Naoki Kita, NTT Access Network Service Systems Labor - Japan

#2760838 - Low-effort On-board Compensation for Hardware imperfections in MPAs

Ovais Bin Usman, Universität Bundeswehr München - Germany

Thomas Delamotte, University of Bundeswehr - Germany

Andreas Knopp, University of Bundeswehr - Germany

#2756755 - Multi-carrier and Multi-mode Transmitter for Earth Observation Satellite

Shigenori Tani, Mitsubishi electric corporation - Japan

Michiya Hayama, Mitsubishi Electric Corporation - Japan

Shogo Tsuzaki, Mitsubishi Electric Corporation - Japan

Katsuyuki Motoyoshi, Mitsubishi Electric Corporation - Japan

Atsushi Okamura, Mitsubishi Electric Corporation - Japan

Room B

10:40 - 12:00

Ka 16: Navigation Systems and Applications

Chair: Gian-Gherardo Calini, GSA, Czech Republic

#121 - Interference Monitoring Service Prototype for Critical Infrastructures

Filippo Rodriguez, Telespazio - Italy

Roberto Salvatorelli, Telespazio - Italy

Giuseppe Pellegrino, Telespazio - Italy

Alessandro Luparello, Telespazio - Italy

Giovanni Gamba, Qascom - Italy

Samuele Fantinato, Qascom - Italy

Salvatore Segreto, Telespazio - Italy

#126 - Integration and Fusion of Space and Ground Technologies and Infrastructures

Marco Lisi, European Space Agency - Netherlands

#26 - EASY-PV. A ready to market EGNSS high Accuracy System improving photovoltaic plant maintenance

Marco Nisi, Sistematica S.p.A. - Italy

Silvia Ullo, University of Sannio - Italy

Pia Addabbo, Giustino Fortunato University - Italy
Marioluca Bernardi, Giustino Fortunato University - Italy
Gianluca Luisi, TOPview s.r.l. - Italy
Alberto Mennella, TOPview s.r.l. - Italy
Ernestina Cianca, CTIF, Tor Vergata University - Italy
Graziano Gagliarde, TOPview s.r.l. - Italy
Muhammad Bilal, CTIF Global Capsule, Aarhus University - Denmark

#86 - Quasi Constant Envelope CDM for VHF Maritime Communications via Satellite

Gennaro Gallinaro, Space Engineering SpA - Italy
Sabino Titomanlio, Space Engineering SpA - Italy
Ralf Mueller, FAU Erlangen - Germany
Nader Alagha, ESA - Netherlands

Room C

10:40 - 12:00

Ka 17: Propagation II

Chair: Michael Zemba, NASA, USA

#55 - Alphasat Propagation Experiment in Toulouse: Two years of measurements

Xavier Boulanger, ONERA - France
Laurent Castanet, ONERA - France

#89 - LARGE- AND SHORT-SCALE DIVERSITY IN GREECE AND UK FOR HIGH THROUGHPUT SATELLITE SYSTEMS

Charilaos Kourogorgas, RAL Space - United Kingdom
Spiros Ventouras, RAL Space - UK
Apostolos Papafragkakis, NTUA - Greece
Athanasios Panagopoulos, NTUA - Greece

#69 - Utilisation of Videodistrometer Measurement to Predict Ka and Q Band Rain Attenuation on Alphasat

Ondrej Fiser, Institute of Atmospheric Physics, Czech - Czech Republic
Petr Pesice, IAP Prague - Czech Republic
Viktor Pek, IAP Prague - Czech Republic
Martin Grabner, CMI Testcom, Prague - Czech Republic
Zuzana Chladova, IAP Prague - Czech Republic
Karel Pitas, IAP Prague - Czech Republic

#101 - FILTERING OF SATELLITE BEACON TIME SERIES IN ORDER TO SUPPRESS DAILY ORBITAL VARIATIONS

Franz Teschl, Graz University of Technology - Austria
Carlo Riva, Politecnico di Milano - Italy

Room D

10:40 - 11:40

Ka 18: Small Satellites II

Chair: James Hinds, Airbus, United Kingdom

#78 - Small Sat TLC Missions for added Value Services complementing Operating Space Systems

Paolo Conforto, Thales Alenia Space - Italy
Giuseppe Tomasicchio, Thales Alenia Space - Italia - Italy
Vincenzo Marziale, Thales Alenia Space - Italia - Italy

#104 - On the development of a Ka-band transceiver for CubeSat satellites

Alessandro Cuttin, PicoSaTs s.r.l. - Italy
Francesca Pelusi, PicoSaTs s.r.l. - Italy

Federico Pergolesi, PicoSaTs s.r.l. - Italy
Enrico Pagana, - Italy
Anna Gregorio, PicoSaTs s.r.l. - Italy
Mario Fragiaco, PicoSaTs s.r.l. - Italy
Federico Dogo, PicoSaTs s.r.l. - Italy
Federico Alimenti, University of Perugia - Italy
Paolo Petrini, Polytechnic of Turin - Italy

#73 - Small satellite Design and Technologies to Operate in EO/TLC/NAV Space System Implementation Scenarios

Stefano Federici, Thales Alenia Space Italy - Italy
Aniceto Panetti, Thales Alenia Space Italy - Italy
Michelangelo L Abbate, Thales Alenia Space Italy - Italy
Andrea Cici, Thales Alenia Space Italy - Italy

12:00 - 13:30

Lunch Break

13:30 - 14:50

Room A

ICSSC 11: Communication Networks and Protocols

Chair: Jonathan Rodriguez, Instituto de Telecomunicacoes, Aveiro, Portugal

#2801474 - An Efficient Data forwarding Approach for LEO Satellite DTNs

Haitham Cruickshank, University of Surrey - United Kingdom
Philip Asuquo, University of Surrey - United Kingdom
Philip Asuquo, University of Surrey - United Kingdom

#2760738 - Modeling and Analysis of Resource Allocation for Distributed Antenna Systems Connected with Satellite Backhubs

Jihwan Choi, DGIST - Korea, South
Seok-Ho Chang, Dankook University - Korea (the Republic of)

#2759623 - Method of Optimizing the Costs of a Satellite Network in Ka and Q/V Bands in the Feeder Link

Flor Ortíz-Gómez, Universidad Politécnica de Madrid - Spain
Ramón Martínez-Rodríguez-O, Universidad Politécnica de Madrid - Spain
Salvador Landeros-Ayala, Universidad Nacional Autónoma de México - Mexico

#2811936 - Smart Resource Allocation scheme for fair coexistence in LTE-U and WiFi

Jonathan Rodriguez, Institution of Telecommunications - Portugal
S. Mumtaz, Institution of Telecommunications - Portugal
Ifiok Otung, University of South Wales - United Kingdom

13:30 - 14:30

Room B

Ka 19: Ka Telecommunication Systems

Chair: Marco Brancati, Telespazio, Italy

#58 - Ka-band return link for UAVs using DSSS with adaptive spreading factor in a DVB-RCS2 context

Jose Radzik, ISAE-Supaero - France
Robin Draye, ISAE-Supaero - France

#62 - A Ka-band Satellite Datalink Demonstrator for RPAS and rotary wing environment

Giuseppe TOMASICCHIO, Thales Alenia Space Italia - Italy
Luigi Mauro, TELEDIFE - Italy
Guglielmo Lulli, Thales Alenia Space - Italy
Fabrizio Ceprani, Thales Alenia Space - Italy

#93 - Performance Evaluation of Ka-band Telecommunication Subsystems for Earth Observation Satellites

Kato Chihaya, Japan Aerospace Exploration Agency - Japan

Mitsuhiro Nakadai, JAXA - Japan

Masanobu Yajima, JAXA - Japan

13:30 - 14:30

Room C

Ka 20: Antennas

Chair: Mike Cascone, CPI, USA

#100 - DBF Array

Avi Freedman, SatixFy - Israel

Cetin Altan, SatixFy Ltd. - United Kingdom

Bahadir Canopolat, SatixFy Ltd. - United Kingdom

Divaydeep Sikri, SatixFy Ltd. - United Kingdom

#111 - High Frequency Applications of Large Unfurlable Mesh Reflectors

Michael Nolan, Northrop Grumman Astro Aerospace - United States

Salam Jmari, Northrop Grumman Astro Aerosp - United States

#125 - Design, Implementation and Operational Considerations For Large Q/V-band Gateway Antennas

Joe Tolleson, CPI ASC Signal Division - United States

Fred Vinezeano, CPI ASC Signal Division - USA

13:30 - 15:00

Room D

ICSSC 12: Space Agencies: Next-generation Communications Architectures

Chair: Philip Liebrecht, NASA, USA

Presentations by:

- Guy Lesthievant, Toulouse Space Center/CNES, France
- Salvador Marti, ESA, The Netherlands
- Enrico Russo, ASI, Italy
- James Schier, NASA, USA
- Masanobu Yakima, JAXA, Japan

14:50 - 15:20

Coffee Break

15:20 - 17:20

Tergeste Room

Plenary Panel 3: Disruptive Broadband Systems

Chair: Chris Hoeber, CFH Engineering, USA

Historically, GEO satellites have taken advantage of broad area coverage to identify their sweet spot which enabled the growth of video distribution services (DBS and DTH) to the consumer. Today, the desire is for broadband services to anyone, anytime and anywhere. This slow and steady trend to streaming broadband data to individual users has given rise to competing technology solutions. This has led to a mismatch of supply and demand and the disruption of long standing \$/MHz pricing models. Where will this all lead?

Moderator: Chris Hoeber, CFH Engineering, USA

Panelists:

- Marc Agnew, ViaSat, USA
- Barry Evans, University of Surrey, United Kingdom
- Peter Garland, MDA Corp., Canada
- Rajeev Gopal, Hughes Network Systems, USA

- James Hinds, Airbus, United Kingdom
- Achim Kleine, SES, Luxembourg

17:20 - 17:40

AIAA ICSSC Best Paper Awards

17:40 - 18:00

Tergeste Room

Closing :

Chair:

- Richard Gedney
- Marco Lisi
- Denise Ponchak
- Franco Marconicchio
- Peter Garland