

Program Schedule

15th International Conference on Space Operations
May 28 - June 01, 2018

The Program Report was last updated January 26, 2018 at 01:29 AM EST. To view the most recent meeting schedule online, visit <https://aiaa-msops18.abstractcentral.com/planner.jsp>

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Monday, May 28, 2018

| Time | Session or Event Info |
|---|---|
| 11:00 AM-1:30 PM, Central Exhibition Hall, EPSTR-CAN-01. CAN - E-Posters , Electronic Poster, 15th International Conference on Space Operations , Chair: Andrew Downen, andrew.z.downen@jpl.nasa.gov, Jet Propulsion Laboratory; Co-Chair: Takahiro Yamada, tyamada@isas.jaxa.jp, JAXA/ISAS | |
| 11:00 AM-1:30 PM | ESA Tracking Network – A European Asset Y. Doat; M. Lanucara; P. Besso; T. Beck; G. Lorenzo; M. Butkovic |
| 11:00 AM-1:30 PM | Development of JAXA's Ka-band Space Communications System for Near-Earth Spacecraft A. Kime; K. Yonekura; H. Fukuoka; M. Ryoki; H. Ito |
| 11:00 AM-1:30 PM, Central Exhibition Hall, EPSTR-DM-03. DM - E-Posters , Electronic Poster, 15th International Conference on Space Operations , Co-Chair: Joan Differding, joan.differding@nasa.gov, NASA Ames Research Center; Chair: Mariella Spada, mariella.spada@esa.int, European Space Agency (ESA) | |
| 11:00 AM-1:30 PM | BEST-NG : a new modeler for describing the satellite's database V. Hémary; B. Larzul; B. Chausserie-Laprée |
| 11:00 AM-1:30 PM | Increased Awareness through Highly Integrated and Collaborative Operation Logbooks M. Tykal; Y. Voumard |
| 11:00 AM-1:30 PM | Design and Implementation of Space Science Satellite Data Processing System L. Chen |
| 11:00 AM-1:30 PM | PEPS : Plateforme d'Exploitation des Produits Sentinel V. Garcia; M.M. Paulin |
| 11:00 AM-1:30 PM, Central Exhibition Hall, EPSTR-FE-04. FE - E-Posters , Electronic Poster, 15th International Conference on Space Operations , Chair: Beatrice Deguine, beatrice.deguine@cnes.fr, CNES; Co-Chair: Keyur Patel, keyur@jpl.nasa.gov, Jet Propulsion Laboratory | |
| 11:00 AM-1:30 PM | MICROSCOPE: review of operations and exploitation after 2 years in orbit P. Guidotti; A. Robert; C.M. Donny; F. Ducheve; P. Prieur; S. Delavault; D. PASCAL; M. Rodrigues; P. Touboul; G. Metris |
| 11:00 AM-1:30 PM, Central Exhibition Hall, EPSTR-GNC-05. GNC - E-Posters , Electronic Poster, 15th International Conference on Space Operations , Chair: Fabio D'Amico, fabio.damico@asi.it, Italian Space Agency - ASI; Co-Chair: Shinichi Nakamura, nakamura.shinichi@jaxa.jp, Japan Aerospace Exploration Agency | |
| 11:00 AM-1:30 PM | GPM Orbital Maintenance Planning and Operations in Low Solar Activity Environment J. Aviles; g. bock; S. Patano; R. Myers; J. Greenwell; P.C. Frazier |

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| 11:00 AM-1:30 PM | COSMO-SkyMed full gyroless operative modes: verification results G. De Luca; L. Fasano; F. Nirchio; M. L'Abbate; D. Calabrese |
| 11:00 AM-1:30 PM | CLOSE APPROACH ANALYSIS AND OPERATIONS OF ISRO GEO/GSO SPACECRAFTS WITH ORBITAL DEBRIS M. RAJESHKANNAN; M. PE; V. SK; S. S; G. K; J. G; R. Jantikar; N. B; S. HP |
| 11:00 AM-1:30 PM, Central Exhibition Hall, EPSTR-GSE-06. GSE - E-Posters , Electronic Poster, 15th International Conference on Space Operations , Chair: Helene Pasquier, helene.pasquier@cnes.fr, CNES; Co-Chair: Yunus Bhayat, ybhayat@sansa.org.za, South African National Space Agency | |
| 11:00 AM-1:30 PM | Design and Development of Responder: a Notification-Acknowledgment Android OS Phone Application J. Greenwell |
| 11:00 AM-1:30 PM | Housekeeping Telemetry Viewer (HKTV) for Microwave Humidity Sounder (MHS) on Metop J. Livschitz; L. Fiedler |
| 11:00 AM-1:30 PM | Model Based Engineering for Manufacture and Operations: A Practical End-to-End Solution S. Reid; S. Gerené; m. bieze |
| 11:00 AM-1:30 PM | The Power of Open-Source Tools for Satellite and Constellation Monitoring M. Tykal; Y. Voumard |
| 11:00 AM-1:30 PM | Design and Development of an Enterprise Ground Segment Service Software for Small Satellites N.K. Singh; A. Kedalya; S. Hegde |
| 11:00 AM-1:30 PM | vFOX: Web Monitoring of Satellite Operations D.L. Moreno; E. Fraga |
| 11:00 AM-1:30 PM, Central Exhibition Hall, EPSTR-ING-07. ING - E-Posters , Electronic Poster, 15th International Conference on Space Operations , Chair: Young Lee, young.h.lee@jpl.nasa.gov, Jet Propulsion Laboratory; Co-Chair: Bang-yeop Kim, kby@kari.re.kr, Korea Aerospace Research Institute | |
| 11:00 AM-1:30 PM | The Mars Generation – Building the Future Success of Deep Space Human Exploration J. Singer |
| 11:00 AM-1:30 PM | Space Education and Awareness in South Africa- Programmes, Initiatives, Achievements, Challenges & Issues S.G. Magagula; J. Witten |
| 11:00 AM-1:30 PM, Central Exhibition Hall, EPSTR-LRBO-08. LRBO - E-Posters , Electronic Poster, 15th International Conference on Space Operations , Chair: Julio Monreal, julio.monreal@esa.int, European Space Agency (ESA); Co-Chair: Craig Cruzen, craig.cruzen@nasa.gov, NASA Marshall Space Flight Center | |
| 11:00 AM-1:30 PM | The FIREBALL Virtual Pivot System for Stratospheric Balloons P. Vola; P. Balard; A. Hutter Rouquette; M. Jaquet; B. Milliard; R. Grange; D. Ferrand; O. Boissin |
| 11:00 AM-1:30 PM | Modeling the Launch Services C. Canart |

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| 11:00 AM-1:30 PM | Multi-boosts missions A. Dalloneau; A. Macaire |
| 11:00 AM-1:30 PM, Central Exhibition Hall, EPSTR-MDM-09. MDM - E-Posters , Electronic Poster, 15th International Conference on Space Operations , Co-Chair: Andrew Monham, andrew.monham@eumetsat.int, EUMETSAT; Co-Chair: Thierry Levoir, thierry.levoir@cnes.fr, CNES | |
| 11:00 AM-1:30 PM | Space Mission Geometry for Almost Every Purpose C.H. Acton |
| 11:00 AM-1:30 PM, Central Exhibition Hall, EPSTR-OC-10. OC - E-Posters , Electronic Poster, 15th International Conference on Space Operations , Chair: Gérard Galet, gerard.galet@cnes.fr, CNES; Co-Chair: Michael Schmidt, Michael.Schmidt@esa.int, European Space Agency (ESA) -ESOC | |
| 11:00 AM-1:30 PM | Progress in Automated Ground Control of ESA's Gaia Mission P. Collins; R. Qedar; J. Marie; L. Brach; D.J. Milligan; G. Whitehead; M. Zambianchi; C. Smith |
| 11:00 AM-1:30 PM | SCOPE product : the Thales Alenia Space Unified Operations Preparation Environment C. Bracco; N. Richasse; D. Portilla |
| 11:00 AM-1:30 PM | The New-Generation Toolset Providing Comprehensive Support for Mission Operations Preparation and Validation S. Reid; W. Heinen; S. Pearson |
| 11:00 AM-1:30 PM, Central Exhibition Hall, EPSTR-PS-11. PS - E-Posters , Electronic Poster, 15th International Conference on Space Operations , Chair: Martin Wickler, martin.wickler@dlr.de, DLR | |
| 11:00 AM-1:30 PM | Swath Preview and Ordering Tool on Web G. Morfill; T. Fruth; M.T. Wörle; J. Simon |
| 11:00 AM-1:30 PM | An Iterated Local Search Algorithm for Agile Earth Observation Satellite Scheduling Problem G. Peng; L. Xing |
| 11:00 AM-1:30 PM, Central Exhibition Hall, EPSTR-SSO-12. SSO - E-Posters , Electronic Poster, 15th International Conference on Space Operations , Co-Chair: Eugene Avenant, eavenant@sansa.org.za, The South African National Space Agency; Chair: Harry Shaw, harry.c.shaw@nasa.gov, NASA-Goddard Space Flight Center | |
| 11:00 AM-1:30 PM | Control your nanosatellite's "app" with EUD4MO C. Coelho; P. Brabbin; M. Sarkarati; M. Merri; O. Koudelka |
| 11:00 AM-1:30 PM | A Lightweight and Efficient Control Center Based on Modern technologies N. Humeau; T. Gateau; G. Crooks; F. Anne |
| 11:00 AM-1:30 PM, Central Exhibition Hall, EPSTR-TKT-13. TKT - E-Poster , Electronic Poster, 15th International Conference on Space Operations , Chair: Sean Burns, sean.burns@eumetsat.int, EUMETSAT; Co-Chair: Michael Schmidhuber, michael.schmidhuber@dlr.de, DLR/GSOC Mission Operations | |

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| 11:00 AM-1:30 PM | Export systems: how to train and transfer operations to new space entrant nations? O. BONNAMY; M. LEONARD; H. SCHEER; P. GUIRAUD |
| 11:00 AM-1:30 PM, Central Exhibition Hall, OA-CAN-01. CAN - Open Access , Open Access, 15th International Conference on Space Operations , Chair: Andrew Downen, andrew.z.downen@jpl.nasa.gov, Jet Propulsion Laboratory; Co-Chair: Takahiro Yamada, tyamada@isas.jaxa.jp, JAXA/ISAS | |
| 11:00 AM-1:30 PM | Follow-the-Sun Operations for the NASA Deep Space Network M. Levesque; M. Johnston; K. Harmon |
| 11:00 AM-1:30 PM | A unique station sharing partnership for extending mutual ground station network coverage J. Mongis; S. Pessirilo; A. Stålnacke; J. Soula |
| 11:00 AM-1:30 PM | The SNOWBEAR project F. Concaro; F. Alvarez; B. Sanadgol; A. Nylund |
| 11:00 AM-1:30 PM | Determination of the indicial response function for TerraSAR-X and TanDEM-X S. Borek; M. Lino; A. Bonfanti; J. Pitann; T. Lesch; E. Maurer |
| 11:00 AM-1:30 PM | The Openvocs Core System Library M. Töpfer |
| 11:00 AM-1:30 PM | SVOM: Challenge of implementing a worldwide coverage VHF Network in the equatorial region S. LACOUR |
| 11:00 AM-1:30 PM | Gain over temperature (G/T) measurement using in-situ spectral solar flux density information and its comparison with the existing measurement technique A. Chanik@Azhar; H. Salim; T.J. Daim; S. Jamil; N. Salim; H. Mustapha |
| 11:00 AM-1:30 PM | Audio Mixing as a Microservice M.J. Beer |
| 11:00 AM-1:30 PM | The Sardinia Deep Space Antenna: Capabilities and Planned Operations of DSS-69 E. Flamini; N. Iacolina; G. Impresario; G. Parca; E. Russo; G. Valente; S. Viviano; S. Asmar; A. Guerrero |
| 11:00 AM-1:30 PM | Alternative Human-Computer Interaction Methods for Voice Communication Systems A. Sonnenberg; M. Töpfer |
| 11:00 AM-1:30 PM | Use of Nack Oriented Reliable Multicast (NORM) protocol for transport of spacecraft telemetry in ground networks P. Baldwin; D. Zoller; A. Cecil |
| 11:00 AM-1:30 PM | Space Mobile Network Concepts for Near-Earth Missions Beyond Low Earth Orbit D.J. Israel; R.M. Morgenstern |

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| 11:00 AM-1:30 PM, Central Exhibition Hall, OA-CSIS-02. CSIS - Open Access , Open Access, 15th International Conference on Space Operations , Chair: Gian Paolo Calzolari, Gian.Paolo.Calzolari@esa.int, European Space Agency (ESA); Co-Chair: Jean-Francois Levesque, jean-francois.levesque@canada.ca | |
| 11:00 AM-1:30 PM | SNUGS: An Open Source and Versatile Ground Segment API Initiative E. Chester; T. Boardman; A. Baker; M. Cosby |
| 11:00 AM-1:30 PM | CCSDS Space Packets transmissions over ISA100/UWB for intra-spacecraft wireless communications O. Ratiu; E. Puschita |
| 11:00 AM-1:30 PM | The Evolution of the CCSDS Orbit Data Messages D. Berry; D.L. Oltrogge |
| 11:00 AM-1:30 PM | Application and Advancing of Technology for Data Reliability Improvement Presented in the Orange Book CCSDS 551.1-O-1 «Correlated Data Generation» V. Vorontsov |
| 11:00 AM-1:30 PM | New Challenges for Dynamic Management of the Space Link Extension Protocol Services: The Amazonia-1 Satellite's Ground Segment. A.C. Julio Filho; A. Maria Ambrosio; M. Gonçalves V. Ferreira |
| 11:00 AM-1:30 PM | ATENA – Adjusting open Test Exchange standard to the spAce domain L. Kwiecinski; O.M. Baksalary; J. Livschitz; J. Modlawska; P. Obminski; S. Panfil; R. Renk; N. Salor Moral; G. Wojciechowski |
| 11:00 AM-1:30 PM | End-to-end model based engineering G. Garcia; R. de FERLUC; X. Picault; P. Tanguy |
| 11:00 AM-1:30 PM, Central Exhibition Hall, OA-CSO-03. CSO - Open Access , Open Access, 15th International Conference on Space Operations , Co-Chair: Mark Danehy, mark.danehy@noaa.gov; Co-Chair: Zeina Mounzer, zeina.mounzer@telespazio-vega.de, Telespazio VEGA Deutschland GmbH | |
| 11:00 AM-1:30 PM | The “We” Approach to Space Traffic Management D.L. Oltrogge |
| 11:00 AM-1:30 PM | Risk of Collision: Effective mitigation through next generation SDA operational services M. Dickinson |
| 11:00 AM-1:30 PM, Central Exhibition Hall, OA-DM-04. DM - Open Access , Open Access, 15th International Conference on Space Operations , Co-Chair: Joan Differding, joan.differding@nasa.gov, NASA Ames Research Center; Chair: Mariella Spada, mariella.spada@esa.int, European Space Agency (ESA) | |
| 11:00 AM-1:30 PM | Stimulation of innovation and new business models: EUMETSAT, ECMWF & Mercator Océan Partners DIAS M. Schick |
| 11:00 AM-1:30 PM | Canada's Geospatial Data Infrastructure: From Data Reception to Dissemination C. Cloutier |
| 11:00 AM-1:30 PM | Dealing with the Big Data - The Challenges for Modern Mission Monitoring and Reporting T. Edwards |

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| 11:00 AM-1:30 PM | The Juno Science Operations Center (JSOC) P. Mokashi; R. Thorpe |
| 11:00 AM-1:30 PM | Copernicus Ground Segment as a Service: From Data Monitoring to Performance Analysis A. Yvernes |
| 11:00 AM-1:30 PM | SVOM French Ground Segment : Mission, Science & Instrument Centres L. Chaoul; G. Walmsley; H. Lalanne |
| 11:00 AM-1:30 PM | Cyber Situational Awareness in Space Organizations Operations Centres J. Vivero; R. Marin |
| 11:00 AM-1:30 PM | Lessons Learned from Creating a Universal Parser for Operational Files T. Ormston; D.T. Lakey; R. Santos |
| 11:00 AM-1:30 PM, Central Exhibition Hall, OA-FE-05. FE - Open Access , Open Access, 15th International Conference on Space Operations , Chair: Beatrice Deguine, beatrice.deguine@cnes.fr, CNES; Co-Chair: Keyur Patel, keyur@jpl.nasa.gov, Jet Propulsion Laboratory | |
| 11:00 AM-1:30 PM | GRACE - 15 Years of Adapting to Aging Equipment M.M. Witkowski; E.S. Davis; R.W. Gaston |
| 11:00 AM-1:30 PM | Power Management on the Grace Satellites with several failed Battery Cells K. Mueller; S. Löw; J. Herman; R.W. Gaston; E.S. Davis |
| 11:00 AM-1:30 PM | Propellant Gauging Experience with Meteosat Second Generation S/C Fleet C. Bihl; F. Murolo; M. Klinc; I. Achkar; B. Robert |
| 11:00 AM-1:30 PM | Operational Reactivity to Rush Orders for Deimos Imaging Satellites I. Bueno; M. Carballo; S. Álvarez; M. Sánchez; M. Luengo; F.A. Bravo; J. Santos Wybenga; P. Pisabarro Marrón; F. Pirondini |
| 11:00 AM-1:30 PM | Tracing Seemingly Unrelated Signatures in Instrument and Power Telemetry to a CD&H Activity on S-NPP J.R. Winsley; L. Sedares; S.D. Lyons; J. Vezzetti; J. Vollmer; S. Humphries; R. Ngaya |
| 11:00 AM-1:30 PM | Flight Operations and Lessons Learned of the Rosetta Alice Ultraviolet Spectrograph J.P. Pineau; J.W. Parker; A.J. Steffl; E. Schindhelm; R. Medina |
| 11:00 AM-1:30 PM | Scientific satellite Odin - A never ending story S. Lundin; S. Silverlind; M. Liljeblad |
| 11:00 AM-1:30 PM | Landsat 8 TIRS Scene Select Mechanism Encoder Anomaly: Operations Change and Future Mission Implications M. England |
| 11:00 AM-1:30 PM | Operational concept evolution from HTV3 to HTV6 and future improvement up to HTV9 Y. Nogawa; T. Kasai; r. Kajiwarra |
| 11:00 AM-1:30 PM | SJ10 Recoverable Scientific Satellite Operations at China Space Science Mission Center L. Yurong; z. wei; Z. Xiao; H. Tai |

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| 11:00 AM-1:30 PM | SOLAR, 9 years of operations as external payload on the ISS: The technical challenges overcome G. Marien; C. Jacobs; A. Michel; S. Klai; A. Karl; D. Van Hoof; L. Pieters |
| 11:00 AM-1:30 PM | Upgrade of critical software on the Star Trackers of CryoSat-2. Needs, challenges and lessons learned of a long "On-Board Software Management" story E. Maestroni; D. Fornarelli; N. Mardle |
| 11:00 AM-1:30 PM | S-NPP ATMS Scan Reversals from an Operations Perspective L. Sedares; J. Walters; C. Walker; S.D. Lyons; G.L. Dixon; J.R. Winsley; J. Vollmer; S. Humphries; B. Nowak |
| 11:00 AM-1:30 PM | Ground Autonomy for an Aging Spacecraft C.J. LaBonde; S. Flynn; M. Muszynski; S. Ryan; D. McCabe; E. Pilinski |
| 11:00 AM-1:30 PM | The GeoFlow 2C science campaign: squeezing good science out of the ageing FSL rack by-passing failing functionality using the novel ESA Ku-IP Service called MPCC D. Van Hoof; J. Rodriguez; F. Bade; T. Van Braeckel; S. Klai; L. Pieters |
| 11:00 AM-1:30 PM | Operating the Rock Abrasion Tool (RAT) After Thirteen Years of an Originally Ninety Day Mission S. Indyk; J. Spring; S. Ford; K. Iuczek; G. Paulsen |
| 11:00 AM-1:30 PM | Advanced RAMS Methodology in Support to Operations for Satellite Life Extension m. sarno; B.B. Ratti; D. Lauria; E. Scorzafava; S. Natalucci |
| 11:00 AM-1:30 PM | GOES-16 Launch and Early Mission Performance, Observations, and Lessons Learned C. Wheeler; T. Walsh; E. Harvie; R. Dudley |
| 11:00 AM-1:30 PM, Central Exhibition Hall, OA-GNC-06. GNC - Open Access , Open Access, 15th International Conference on Space Operations , Chair: Fabio D'Amico, fabio.damico@asi.it, Italian Space Agency - ASI; Co-Chair: Shinichi Nakamura, nakamura.shinichi@jaxa.jp, Japan Aerospace Exploration Agency | |
| 11:00 AM-1:30 PM | Ground Testbed Development of Navigation System for Lunar Lander Y. Na; Y. Jung; H. Bang |
| 11:00 AM-1:30 PM | Implementation and Performance Evaluation of a Semi-active Ranging System H. Oh; S. Lee; M. Kim; J. Seong; s. ahn |
| 11:00 AM-1:30 PM | Parametric Trajectory Optimization of Boost-Glider M. Sun; Z. Wang; Z. Chen |
| 11:00 AM-1:30 PM | A Chemical Propulsion System Model for Earth Orbiting Satellites M. Öztürk |
| 11:00 AM-1:30 PM | Convexified Satellite Formation Control with Eccentricity/Inclination Vector Separation Y. Lim; Y. Jung; H. Bang |
| 11:00 AM-1:30 PM | AOCS General Architecture Design For SVOM Satellite S. Liu; D. Li; B. Sun; G. Qin; Y. Fang; J. Li; B. Chen |

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| 11:00 AM-1:30 PM | Monitoring of GEO satellite thruster efficiency Y. Hwang; B. Lee |
| 11:00 AM-1:30 PM | Innovative smartphone applications for Precise Point Positioning A. Privat; M. Pascaud; D. Laurichesse |
| 11:00 AM-1:30 PM | Formation flight handling with 4 satellites – Electronic Earth Observation as an application C. Delmas; C. HOURTOLLE; Y. PREVOT |
| 11:00 AM-1:30 PM | Space Debris Collision Avoidance of Electromagnetic Spacecraft Formation Flying Y. Xie; J. Zhang; Y. Zhang |
| 11:00 AM-1:30 PM | Application of the SDRE Technique in the Satellite Attitude and Orbit Control System with Nonlinear Dynamics A.G. Romero; L.C. Gadelha; R.A. Chagas |
| 11:00 AM-1:30 PM | OrbiPro – a toolbox for accurate orbit propagation L.F. Barbulescu; A.F. Butu; M.L. Mamuleanu; S.L. Scortan; T. Ceolin; R. Alacevich; J. Grzymisch |
| 11:00 AM-1:30 PM | Use of OMV for Debris Removal and Mitigation Strategies s. pathak; U. GUVEN |
| 11:00 AM-1:30 PM, Central Exhibition Hall, OA-GSE-07. GSE - Open Access , Open Access, 15th International Conference on Space Operations , Chair: Helene Pasquier, helene.pasquier@cnes.fr, CNES; Co-Chair: Yunus Bhayat, ybhayat@sansa.org.za, South African National Space Agency | |
| 11:00 AM-1:30 PM | A dedicated Quality approach to manage the “small” software tools in control centers. G. NAVARRO; P. YVARD; E. VAN DILLEN |
| 11:00 AM-1:30 PM | Research on Identifying Influential Nodes for Monitoring Based on Construction of Complex Network in Ground System J. Xu; J. Li; Y. Zhang; T. Zhang |
| 11:00 AM-1:30 PM | Case Based Reasoning within Software Testing P. Srivastava |
| 11:00 AM-1:30 PM | Developing a “Single Pane of Glass” for Spacecraft Operations: Shared User Interfaces for Increasing Situation Awareness and Decreasing Development Effort. A.M. Gacy; D. Powers |
| 11:00 AM-1:30 PM | Harmonisation of products for ground segment operations at ESA K. Widegård; M. Pecchioli |
| 11:00 AM-1:30 PM | QUESS Operations at Chinese Space Science Mission Center j. su; L. Yurong; H. Tai |
| 11:00 AM-1:30 PM | Automated distribution of ESA software J. BERTON; M. Spada; P. Ellsiepen |
| 11:00 AM-1:30 PM | Innovative Approach for PMM Data Processing and Analytics. M. Cencetti; R. Messineo; F. Filippi |

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| 11:00 AM-1:30 PM | Business Process Models Applied to an Operational Ground System L.C. Anderson; M. Stanlis; S. Jain |
| 11:00 AM-1:30 PM | SPOC, An 'alien' App in the Android world to monitor Spacecraft Operations J. Fauste; J. Peñataro; F. Castaño; J. Durá; J. Castro Cerón |
| 11:00 AM-1:30 PM | Taranis Science Ground Segment : Technical Expertise Centre D. RAULIN; A. Dick |
| 11:00 AM-1:30 PM | Ground Segment engineering as an agile activity J. Pfau; S. Mehlhase; S. Schünemann |
| 11:00 AM-1:30 PM | Hybridized Agile Software Development of Flight Control Team Tools for International Space Station's Payload Operations Integration Center C.M. Albers |
| 11:00 AM-1:30 PM | High Availability and Failover of Ground Software Across Multiple Ground Stations B. UGUR; I. Tevrizoglu; M. Eroglu |
| 11:00 AM-1:30 PM | Little Nanosatellites in the Air, Mega-challenges on the Ground F. Quartier; R. Atori; N. Rousse |
| 11:00 AM-1:30 PM | Out-Of-The-Box Sequencing Software B.A. Streiffert; B.G. Chafin; B. Roth; D. Conner |
| 11:00 AM-1:30 PM | Continuous Delivery: Software Deployment and Configuration Management for Critical Operations Environments N. Perera; T. Beck |
| 11:00 AM-1:30 PM | Venus Image Quality monitoring : a challenging multi-phased organization J. Raynaud; B. Specht; P. Crebassol; P. Gamet; P. Ferrier; V. Debaecker; L. Mongin; L. Bray |
| 11:00 AM-1:30 PM | The Role of Operation Scenarios in Ground Segment Development M.O. Kelley; S. Ryan; E. Pilinski; M. Packard; J. Moffatt; A. DeWolfe; P. Vedder; Z. AlShamsi; M. Alloghani; M. AlNasser; O. Hussain; O. Al Hammadi; K.S. Zowayed |
| 11:00 AM-1:30 PM | Design Sprints for Agile Mission System Software Design J. Trimble; C. Hacskeylo |
| 11:00 AM-1:30 PM | Experiment feedback on a microservices architecture M. Sordi; D. Heulet; F. Liège |
| 11:00 AM-1:30 PM | Ground Software Technologies – Embracing Change: Mission Drivers and Technology Opportunities to Enable Long Lived Missions B.J. Giovannoni |
| 11:00 AM-1:30 PM | User centered design J. Tolle; E. PELLETERAT DE BORDE |

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| 11:00 AM-1:30 PM | IASI mini-TEC: a mini technical expertise center dedicated to IASI performances' monitoring during MetOp-C thermal vacuum test C. Maraldi; E. Jacquette; B. Delatte; C. Luitot; C. Baqué; J. Calvel; J. Donnadille; L. Buffet; A. Penquer; C. Villaret; O. Vandermarcq; E. Jurado; C. Le Fèvre; F. Bermudo |
| 11:00 AM-1:30 PM | How IT Solutions as containerization can improve Ground System Engineering activities V. Hamoniaux; C. Ketchedji; S. Subias |
| 11:00 AM-1:30 PM | EKSE: A Command Line Interface for EGS-CC based Systems T. Schiller |
| 11:00 AM-1:30 PM | Ground Control Segment automated deployment and configuration with ANSIBLE and GIT R. PIEPLU |
| 11:00 AM-1:30 PM | Validating with RISE, rising the capabilities of proven tools M. Medrano; J. Evade; S. Oms |
| 11:00 AM-1:30 PM, Central Exhibition Hall, OA-HSO-08. HSO - Open Access , Open Access, 15th International Conference on Space Operations , Chair: Thomas Mueller, th.mueller@dlr.de, DLR; Co-Chair: Mark Lupisella, mark.l.lupisella@nasa.gov, NASA-Goddard Space Flight Center | |
| 11:00 AM-1:30 PM | Ground Operations in Human Space Flight D.F. Feeney; O. Peinado |
| 11:00 AM-1:30 PM | Operations of automatic tracking cameras named "HDTV-EF2" on JEM-EF R. Okazaki; J. Hasegawa; T. Mano |
| 11:00 AM-1:30 PM | Recommendations for development of space plant hardware concepts I. Karoliussen; L.F. Coelho |
| 11:00 AM-1:30 PM | Science Operations Concepts for Mars Exploration Utilizing Low-Latency Telerobotics M.R. Wright; M.L. Lupisella; J. Bleacher |
| 11:00 AM-1:30 PM | CADMOS support to astronauts performing science on board the International Space Station C. Thevenot |
| 11:00 AM-1:30 PM | MaMBA – Moon and Mars Base Analog and Prototype C. Heinicke; M. Avila |
| 11:00 AM-1:30 PM, Central Exhibition Hall, OA-ING-09. ING - Open Access , Open Access, 15th International Conference on Space Operations , Co-Chair: Bang-yeop Kim, kby@kari.re.kr, Korea Aerospace Research Institute; Chair: Young Lee, young.h.lee@jpl.nasa.gov, Jet Propulsion Laboratory | |
| 11:00 AM-1:30 PM | The ESA Space Camp – Space and Science for new generations A. Ercolani; A. Kowalczyk; G. Saccoccia; P. Bartilla |
| 11:00 AM-1:30 PM | The CESAR education initiative M. Pérez-Ayúcar; M. Breitfellner; M. Castillo |

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| 11:00 AM-1:30 PM, Central Exhibition Hall, OA-LRBO-10. LRBO - Open Access , Open Access, 15th International Conference on Space Operations , Chair: Julio Monreal, julio.monreal@esa.int, European Space Agency (ESA); Co-Chair: Craig Cruzen, craig.cruzen@nasa.gov, NASA Marshall Space Flight Center | |
| 11:00 AM-1:30 PM | Esrangle Space Center – A European Rocket and Balloon Launch and Operation Site North of The Arctic Circle M. Abrahamsson; G. Florin; C. Lockowandt |
| 11:00 AM-1:30 PM | Development and Testing of a Lab-scale Test-bench for Hybrid Rocket Engines M. Bouziane; A. De Morais Bertoldi; P. Hendrick; M. Lefebvre |
| 11:00 AM-1:30 PM | The main missions and means of the GSC weather station G. Bouin; S. Lirola; c. sorbet |
| 11:00 AM-1:30 PM, Central Exhibition Hall, OA-MDM-11. MDM - Open Access , Open Access, 15th International Conference on Space Operations , Co-Chair: Andrew Monham, andrew.monham@eumetsat.int, EUMETSAT; Co-Chair: Thierry Levoir, thierry.levoir@cnes.fr, CNES | |
| 11:00 AM-1:30 PM | COSMO-SkyMed status and usage: constellation summary G. De Luca; A. Coletta; F. Nirchio; E. Scorzafava; L. Fasano; M. L'Abbate; D. Calabrese |
| 11:00 AM-1:30 PM | Space Weather Forecasting and Impact Mitigation P. Thorn; M. Gibbs; D. Jackson |
| 11:00 AM-1:30 PM | GreenSpace and Reuse Scenarios for Launcher industry s. HEINRICH |
| 11:00 AM-1:30 PM | The Method of Health Management on Satellite Constellation Network J. Li |
| 11:00 AM-1:30 PM | HAYABUSA-2/MASCOT RF link: Ensuring communication at all time C. Dudal; O. Bompis; a. Moussi; L. Lorda; C. Cénac-Morthé; D. Granena; e. canalias; t. martin; A.F. Charpentier; r. garmier; C. Ziach; T. Ho; n. termtanasombat; K. Sasaki; C. Krause; j. biele; T. Yoshimitsu; Y. Tsuda; T. Okada |
| 11:00 AM-1:30 PM | SAR systems solutions for dedicated applications, optimized in conjunction with existing assets: Maritime Surveillance D. Calabrese; M. L'Abbate; A. Cricenti; G. De Luca |
| 11:00 AM-1:30 PM | JUICE interplanetary operations design : drivers and challenges E. Ecale; F. Torelli; I. Tanco |
| 11:00 AM-1:30 PM | Tracking of Aircraft in Distress Using the Cospas-Sarsat System D. Delcuvelerie |
| 11:00 AM-1:30 PM | Perturbed Zero Drift Orbit Design for Local Coverage Maximization E. Kim; H. Kim; S. Lee |

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| 11:00 AM-1:30 PM | EO-SAT1 Mission H. Bosman; I. Alers |
| 11:00 AM-1:30 PM | Radioisotope Power Systems: Considerations for use of Dynamic versus Static Conversion Technologies for NASA Missions S. Johnson; K. Lively; Y.H. Lee |
| 11:00 AM-1:30 PM, Central Exhibition Hall, OA-OC-12. OC - Open Access , Open Access, 15th International Conference on Space Operations , Chair: Gérard Galet, gerard.galet@cnes.fr, CNES; Co-Chair: Michael Schmidt, Michael.Schmidt@esa.int, European Space Agency (ESA) -ESOC | |
| 11:00 AM-1:30 PM | The lunar exploration payloads operations concepts S. SHIN; H. Ko |
| 11:00 AM-1:30 PM | Complex future spacecraft: challenges to flight operations E. Maurer; D. Schulze; M. Wickler |
| 11:00 AM-1:30 PM | Collaborative analysis for scientific space science mission B. Meng; D. Li |
| 11:00 AM-1:30 PM | Scaling Galileo LEOP from Two Spacecraft to Four S. Melloni; T. Cowell; D. Liberatore; F. Di Marco |
| 11:00 AM-1:30 PM | The Sentinels LEOP Experience: Putting in Orbit the Copernicus Constellation J. Morales-Santiago; P. Emanuelli |
| 11:00 AM-1:30 PM | Optimizing the 4-spacecraft Galileo operations concept B. LEGER; V. Tyrou; H. Gautier |
| 11:00 AM-1:30 PM | CNES Flight Dynamics operations design for the first Ariane5 Launch of 4 GALILEO satellites P. Perrachon; L. Lorda; X. Pena; P. Labourdette; M. Thierry; I. Valenzuela Molina |
| 11:00 AM-1:30 PM | The EDRS-A Payload Control Center: Entangled in a Web of Constraints. F. Wallrapp; M. Schmidhuber |
| 11:00 AM-1:30 PM | SOLAR, 9 years of operations as external payload on the ISS: The evolution of the operational concept A. Michel; G. Marien; C. Jacobs; S. Klai; A. Karl; D. Van Hoof; L. Pieters |
| 11:00 AM-1:30 PM | Improving S-NPP's On-Board Stored Maneuver Sequence System with New Maneuver Options J.R. Winsley; S.D. Lyons; R. Harpold; S. Nair; S. Humphries; J. Vollmer |
| 11:00 AM-1:30 PM | HP³ – Experiment on InSight Mission – Operations on Mars C. Krause; C. Fantinati; E. Barrett; M. Grott; T. Hudson; S. Jansen; J. Jänchen; J. Knollenberg; D. May; C. Parcheta; A. Rutcynska; J. Singer; S. Smrekar; T. Spohn; L. Thomas; M. Wiedemann |
| 11:00 AM-1:30 PM | The search campaign and techniques used to identify & image the Philae Lander on the surface of Comet 67P/Churyumov-Gerasimenko L. O'Rourke |

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| 11:00 AM-1:30 PM | InSight: the deployment and commissioning operations of the Martian Seismometer C. Yana |
| 11:00 AM-1:30 PM | InSight: Operational Products Validation on Ground E. Gaudin; C. Yana |
| 11:00 AM-1:30 PM, Central Exhibition Hall, OA-PS-13. PS - Open Access , Open Access, 15th International Conference on Space Operations , Chair: Martin Wickler, martin.wickler@dlr.de, DLR; Co-Chair: Vladimir Nazarov, Vladimir.Nazarov@cosmos.ru, IKI RAN | |
| 11:00 AM-1:30 PM | PAZ Mission Planning Facility: Coping with Complexity and Performance through Automated Operations L. Fernandez; A. Guarido; J. Tejo |
| 11:00 AM-1:30 PM | Multiple Autonomous Agile Satellites Coordinating and Scheduling in an Uncertain Environment L. He; X. Liu; X. Chu; Y. Chen; Y. Chen; K. Liu |
| 11:00 AM-1:30 PM | The CONSERT operations planning process for the Rosetta mission Y. Rogez; P. Puget; S. Zine; A. Hérique; W. Kofman; N. Altobelli; M. Ashman; M. Barthélémy; j. biele; A. Blazquez; C. Casas; M. Sitjà; C. Delmas; C. Fantinati; J. Fronton; B. Geiger; K. Geurts; B. Grieger; R. Hahnel; R. Hoofs; A. Hubault; E. Jurado; M. Kueppers; M. Maibaum; A. Moussi-Soffys; P. Munoz; L. O'Rourke; B. Pätz; D. Plettemeier; S. Ulamec; C. Vallat |
| 11:00 AM-1:30 PM | Research on emergency observation mission replanning method H. Wu; J. Tong; H. Tai; L. Yurong; Z. Xiao |
| 11:00 AM-1:30 PM | Research on multiplexing of Data Transmission Resource based on CAS's Space Science Strategic Priority Programs H. Li; C. HAN; W. YU |
| 11:00 AM-1:30 PM | Payload Traffic Management & Spectral monitoring CSM adapted to Ka Multispots Broadband Systems M. HUAN |
| 11:00 AM-1:30 PM | JADE implemented multi-agent based platform for multiple autonomous satellite system J. Li |
| 11:00 AM-1:30 PM | Mission Planning System For the Operation of Multi-payload on Chinese Space Laboratory P. Wu; H. Wang; L. Guo |
| 11:00 AM-1:30 PM | Spitzer Space Telescope: Innovations and Optimizations in the Extended Mission Era P. Lowrance; J. Ingals; J. Krick; B. Glaccum; S. Carey; W. Mahoney; E. Scire; E. Furlan; Y. Mei; J.C. Hunt; B. Kahr; K. Stowers; D.A. Bliss; P. Haas; P.A. Travis; W. Evenson |
| 11:00 AM-1:30 PM | Improving the tasking time for radar imaging satellites – Not only a mission planning story! F. Mrowka; B. Schättler; M.T. Wörle; T. Göttfert |

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| 11:00 AM-1:30 PM | Adapting the Battery Model in the Mission Planning System of Ageing Satellites F. Stathopoulos; C. Lenzen; F. Mrowka |
| 11:00 AM-1:30 PM | ExoMars Trace Gas Orbiter Instrument Modelling Approach to Streamline Science Operations M. Munoz Fernandez; D. Frew; M. Ashman; A. Cardesin Moinelo; J. Garcia Beteta; B. Geiger; L. Metcalfe; F. Nespoli; C. Muniz Solaz |
| 11:00 AM-1:30 PM | Mission of Change - Planning for Mars Express then and now R. Steel; R. Blake |
| 11:00 AM-1:30 PM | ExoMars 2016 Trace Gas Orbiter and Mars Express Coordinated Science Operations Planning A. Cardesin Moinelo; B. Geiger; M. Costa ; D. Frew; M. Ashman; M. Muñoz; J. Garcia Beteta; L. Metcalfe; M. Breitfellner; J. Marin Yaseli de la Parra; D.R. Merritt; M. Castillo; E. Grotheer; P. Martin; D. Titov; H. Svedhem |
| 11:00 AM-1:30 PM | BridgeSat Laser Communication Scheduling: a Case Study E. Herz; J. Campagna |
| 11:00 AM-1:30 PM | Incremental Mission Planning for Automated Planning and Scheduling N. Isik; I. Acikgoz |
| 11:00 AM-1:30 PM | Cassini's Final Days: Operating in a New Environment n. vandermey; T.L. Ray; W. Heventhal |
| 11:00 AM-1:30 PM | Innovative Development of a Cross-Center Timeline Planning Tool R. Pedoto; C.M. Albers; D. Benjamin; J. Reynolds |
| 11:00 AM-1:30 PM | A comparative study of mission planning systems: from Earth Observation business to interplanetary missions. J. Marin Yaseli de la Parra; Á. Ortiz; P. Martin |
| 11:00 AM-1:30 PM | The Integrated Network Planning System (INPS), -INPS System Upgrade- T. Adachi; F. Kudo |
| 11:00 AM-1:30 PM | Mars Express Science Operations During Deep Eclipse: An Example of Adapting Science Operations On Aging Spacecraft D.R. Merritt; A. Cardesin Moinelo; J. Marin Yaseli de la Parra; M. Breitfellner; R. Blake; M. Castillo Fraile; E. Grotheer; P. Martin; D. Titov |
| 11:00 AM-1:30 PM | SPICE for ESA Planetary Missions: geometry and visualization support to studies, operations and data analysis within your reach M. Costa |
| 11:00 AM-1:30 PM, Central Exhibition Hall, OA-SSO-14. SSO - Open Access , Open Access, 15th International Conference on Space Operations , Chair: Eugene Avenant, eavenant@sansa.org.za, The South African National Space Agency; Co-Chair: Harry Shaw, harry.c.shaw@nasa.gov, NASA-Goddard Space Flight Center | |
| 11:00 AM-1:30 PM | Control of Multi-Picosatellite Systems: Tiny Scripting Language and Multi-Layer Compass Protocol V. Dombrovski; K. Schilling |

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| 11:00 AM-1:30 PM | Flight operations of simplified 50-kg microsatellites for regional observations released from International Space Station Y. Sakamoto; T. Kuwahara; K. Yoshida |
| 11:00 AM-1:30 PM | The Development and flight practice of KT-1B electrical power subsystem L. Hongqiang; X. Iijun; B. ling |
| 11:00 AM-1:30 PM | M3MSat First year of Operations C. Carrie; D. Hudson; j. Cain; m. doyon |
| 11:00 AM-1:30 PM | Lessons Learned: Little Intelligent Nanosatellite of KAIST(LINK) Y. Lim; Y. Na; K. Kim; Y. Jung; J. Kim; T. Kim; H. Bang |
| 11:00 AM-1:30 PM | Analysis of SLE standard applied to Small Satellite Operations J. Pena; P. Hyvönen; J. Alvarez |
| 11:00 AM-1:30 PM | NEOSSat Recovery Following Magnetometer and Torque Rod Failure N. Jackson; V. Abbasi; R. Scott; R. Wessels; M. Cannata; S. Eagleson |
| 11:00 AM-1:30 PM, Central Exhibition Hall, OA-TKT-15. TKT - Open Access , Open Access, 15th International Conference on Space Operations , Chair: Sean Burns, sean.burns@eumetsat.int, EUMETSAT; Co-Chair: Michael Schmidhuber, michael.schmidhuber@dlr.de, DLR/GSOC Mission Operations | |
| 11:00 AM-1:30 PM | Job analysis and collaborative training for spacecraft operators in future control rooms S. Schubert; C. Amodio; V. Burkhardt |
| 11:00 AM-1:30 PM | APPLICATIONS, CAPACITIES AND DESIGN CONCEPTS OF REAL TIME SIMULATORS FOR SATELLITE MISSIONS A.L. Garcia; L.A. Handszok |
| 11:00 AM-1:30 PM | Information Sharing between spacecraft operators by the SOE Visualization software in JAXA Y. MIYANO |
| 11:00 AM-1:30 PM | Human Factor and Knowledge Management in 24/7 Multi-Mission Satellite Operations F. Stathopoulos; K. Oezdemir |
| 11:00 AM-1:30 PM | Research on the satellite Onboard Software behavior in Software-In the-Loop Test bench F. SalarKaleji |
| 11:00 AM-1:30 PM | The Design and Architecture of Earth Orbiting Satellite Simulator (EOSS) M. Ekinici; M. Öztürk; B. Yurttagul; C. Celik; O. Sezer |
| 11:00 AM-1:30 PM | From Submarine to Satellite Operations: A Training Success Story C.S. Decoust; M. Magalhães; P. Rolland; K. Pizolato; M. Farias |
| 11:00 AM-1:30 PM, Central Exhibition Hall, TPSTR-CAN-01. CAN - T-Posters , Traditional Poster, 15th International Conference on Space Operations , Chair: Andrew Downen, andrew.z.downen@jpl.nasa.gov, Jet Propulsion Laboratory; Co-Chair: Takahiro Yamada, tyamada@isas.jaxa.jp, JAXA/ISAS | |

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| 11:00 AM-1:30 PM | Development of Ground Station for Korea Lunar Mission: Retrofit of an existing antenna D. Park; s. ahn; B. Kim |
| 11:00 AM-1:30 PM | Testing Mobile Voice System Endpoints F. Junge; M. Töpfer |
| 11:00 AM-1:30 PM | NASA Space Network Project Operations Management: Past, Present and Future for the Tracking and Data Relay Satellite Constellation T. Sobchak; D.W. Shinnars; H. Shaw |
| 11:00 AM-1:30 PM | Commissioning of NASA's 3rd Generation Tracking and Data Relay Satellites (TDRS-KLM) G.W. Heckler; J. Donaldson; C. Gramling; B. Ashman; M. Toral; J. Lyon |
| 11:00 AM-1:30 PM | Use of Open Networks and Delay-Tolerant Protocol to Decrease WAN Latency of EOS Near Real-Time Data B. McLemore |
| 11:00 AM-1:30 PM | Integration Network of Navigation and Communication Based on Near Space Aerostat W. Chen |
| 11:00 AM-1:30 PM | Antenna Pedestal Alignment Strategy for Tracking LEO Satellites m. ipek |
| 11:00 AM-1:30 PM | Comparison of voice systems for Human Space Flight and Satellite Missions O. Peinado; D. Feeney |
| 11:00 AM-1:30 PM | Towards Sustainable Ground Infrastructure – A Solar Plant in New Norcia M. ROUBERT; U. Kugel |
| 11:00 AM-1:30 PM, Central Exhibition Hall, TPSTR-CSIS-02. CSIS - T-Posters , Traditional Poster, 15th International Conference on Space Operations , Chair: Gian Paolo Calzolari, Gian.Paolo.Calzolari@esa.int, European Space Agency (ESA); Co-Chair: Jean-Francois Levesque, jean-francois.levesque@canada.ca | |
| 11:00 AM-1:30 PM | Use of Virtual Observatory standards in ground segment mission at LAM (Laboratoire d'Astrophysique de Marseille) J. Meunier; A. Sapone; c. surace |
| 11:00 AM-1:30 PM, Central Exhibition Hall, TPSTR-CSO-03. CSO - T-Posters , Traditional Poster, 15th International Conference on Space Operations , Co-Chair: Mark Danehy, mark.danehy@noaa.gov; Co-Chair: Zeina Mounzer, zeina.mounzer@telespazio-vega.de, Telespazio VEGA Deutschland GmbH | |
| 11:00 AM-1:30 PM | Operational innovation for the service of commercial earth observation satellites K. Matsuta |
| 11:00 AM-1:30 PM, Central Exhibition Hall, TPSTR-DM-04. DM - T-Posters , Traditional Poster, 15th International Conference on Space Operations , Co-Chair: Joan Differding, joan.differding@nasa.gov, NASA Ames Research Center; Chair: Mariella Spada, mariella.spada@esa.int, European Space Agency (ESA) | |
| 11:00 AM-1:30 PM | Aircraft Telemetry Data Association Mining Based on Sampling Value Difference Y. Qu; H. Wu; X. Wu; L. Zeng; W. Chen |

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| 11:00 AM-1:30 PM | Automated derivation of tests from specifications T. Stoitsev; S. Straw; C. Legat; E. Gomez Gomez |
| 11:00 AM-1:30 PM | Ground Testbed Validation of Real-time Image Navigation and Registration Algorithms for Earth Observation Operations of Geostationary Satellite T. Kim; Y. Jung; H. Bang |
| 11:00 AM-1:30 PM | Flexible Data Handling in the Flight Control Decision Support Software for Space Science Satellites Y. Zhang; X. Peng; C. Gao |
| 11:00 AM-1:30 PM | Research on the Application of Machine Learning Algorithm in Satellite Automatic Monitoring W. YU; Z. Xiao; C. HAN; H. Li |
| 11:00 AM-1:30 PM | Evolving Services as response to a Changing Environment – EUMETSAT Data Services Roadmap L. Wolf |
| 11:00 AM-1:30 PM | InSight: the routine operations of the Martian Seismometer from the SISMOC Operations Center C. Yana; L. Luno |
| 11:00 AM-1:30 PM | WebGeocalc and Cosmographia: Modern Tools to Access OPS SPICE Data B. Semenov |
| 11:00 AM-1:30 PM | SDB NEXT – a step to a virtual satellite a. mollier |
| 11:00 AM-1:30 PM | Big-data for satellite yearly reports generation N. Hennion |
| 11:00 AM-1:30 PM | Using High Fidelity Ground Test Data to Strategically Inform Statistical Analysis of Health and Safety Spacecraft Telemetry a. barrie; S. Kreisler; D. Da Silva; D. Rand |
| 11:00 AM-1:30 PM | Magnetospheric Multiscale (MMS) Mission Operations Center (MOC) Situational Awareness C.M. Riley; C.M. Phillips; D.N. Talmage; R.A. Jim |
| 11:00 AM-1:30 PM | Practical Aspects of Anomaly Detection Algorithms in Satellite Operations G. Adamski; J. Spencer-Jones; G. Kbidy |
| 11:00 AM-1:30 PM | Rosetta Science Ground Segment Observation Quick Look System L. O'Rourke; M. Cuevas; M. Aberasturi; A. Villacorta; P. Pesciullesi; J. Diaz; M. Kueppers; M. Taylor; F. Jansen; P. Martin |
| 11:00 AM-1:30 PM, Central Exhibition Hall, TPSTR-FE-05. FE - T-Posters , Traditional Poster, 15th International Conference on Space Operations , Chair: Beatrice Deguine, beatrice.deguine@cnes.fr , CNES; Co-Chair: Keyur Patel, keyur@jpl.nasa.gov , Jet Propulsion Laboratory | |
| 11:00 AM-1:30 PM | Operations of the Sample Analysis at Mars instrument suite onboard the Curiosity rover J. Bonnet; C. Szopa; S. Teinturier; D. Coscia; A. Buch; C. Freissinet; C. Malespin; E. Lorigny; M. Cabane; P. Mahaffy |

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| 11:00 AM-1:30 PM, Central Exhibition Hall, TPSTR-GNC-06. GNC -T-Posters , Traditional Poster, 15th International Conference on Space Operations , Co-Chair: Fabio D'Amico, fabio.damico@asi.it, Italian Space Agency - ASI; Chair: Shinichi Nakamura, nakamura.shinichi@jaxa.jp, Japan Aerospace Exploration Agency | |
| 11:00 AM-1:30 PM | Formation Flying of a Two-CubeSat Virtual Telescope in a Highly Elliptical Orbit A. Naseri; R. Pirayesh; R.K. Adcock; S.J. Stochaj; N. Shah; J. Krizmanic |
| 11:00 AM-1:30 PM | Conjunction Assessment - Flow Automation Support Tool in KARI : From Design to Operations O. Jung; J. Seong; s. ahn |
| 11:00 AM-1:30 PM | End-to-End Simulation of On-Orbit-Servicing – an Overview C. Stangl; H. Benninghoff; B. Brunner; R.P. Faller; M. Gnat; R. Krenn; R. Florian; M. Stelzer; D. Weber |
| 11:00 AM-1:30 PM | A stars imager prototype with self-calibration for stellar sensor M. Cheriet; H. Benzeniar; B. Belaidi; N. Abderrahim; M. Hamoudi |
| 11:00 AM-1:30 PM | Low Cost Optical Orbit Determination System A. JANER; G. Durand; P. Sola Romeu |
| 11:00 AM-1:30 PM | Evaluation of the effect of ambient temperature variation on the repeatability of a semi-automatic calibration procedure for a Large Helmholtz Coils System, employed for the calibration of space qualified magnetometers D.J. Gouws; E.F. Saunderson |
| 11:00 AM-1:30 PM | Evaluation of the variation in Magnetic Moment of a magnetic torque rod for a micro satellite application due to change in ambient temperature from -30 to 70 degrees Celcius. E.F. Saunderson; D.J. Gouws; M. Honeth |
| 11:00 AM-1:30 PM | Parameter Tuning of AFC-Based CMG for Optimal Attitude Control Performance of a Small Satellite M. Salleh; N. Mohd Suhadis |
| 11:00 AM-1:30 PM, Central Exhibition Hall, TPSTR-GSE-07. GSE - T-Posters , Traditional Poster, 15th International Conference on Space Operations , Chair: Helene Pasquier, helene.pasquier@cnes.fr, CNES; Co-Chair: Yunus Bhayat, ybhayat@sansa.org.za, South African National Space Agency | |
| 11:00 AM-1:30 PM | On the CFOSAT mission ground segment development F. GOUILLON; G. Boutonnet; L. Clarac; F. Menot |
| 11:00 AM-1:30 PM | The design and implementation of an Innovative Monitor and control room solution Y. Bhayat |
| 11:00 AM-1:30 PM | The Hardware Abstraction Layer Framework for test benches and EGSE satellite applications M. BARBERO; V. Leger; A. Bobey |
| 11:00 AM-1:30 PM | The SMILE Mission Ground Segment Architecture f. ma |
| 11:00 AM-1:30 PM | ARIADNE : a system for evaluation of AMAZED's spectroscopic redshift estimation efficiency P. Chabaud; M. Leurent; c. surace |

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| 11:00 AM-1:30 PM | The LAM Space Simulation Chamber ERIOS: a bit of Universe enclosed to test the Euclid NISP instrument C. Fabron; M. Carle; A. Costille; F. Beaumont; J. Garcia; E. Grassi; B. Milliard; P. Landerecche; D. Le Mignant; P. Vola; P. Laurent; R. Barette; J. Benedetti; P. Vors; M. Pons; A. Bozier |
| 11:00 AM-1:30 PM | Modular Orekit-based Flight Dynamics Software M.S. Journot; N. FROUVELLE; C.I. Udroui; L.F. Barbulescu; O.M. Hogoiiu; M. Teodorescu; A. Janer; P. Sola Romeu |
| 11:00 AM-1:30 PM, Central Exhibition Hall, TPSTR-HSO-08. HSO - T-Posters , Traditional Poster, 15th International Conference on Space Operations , Chair: Thomas Mueller, th.mueller@dlr.de, DLR; Co-Chair: Mark Lupisella, mark.l.lupisella@nasa.gov, NASA-Goddard Space Flight Center | |
| 11:00 AM-1:30 PM | Minimal Configuration Lunar Habitat J. Lysenko; M. Kaliapin; G. Osinovyy; A. Degtyarev |
| 11:00 AM-1:30 PM | Arkadiko: A lunar space station mission proposal for the development of deep space exploration S.P. Iliev; O. Julibert; B. Hassan; A. Vermeulen; K. Patel; N.R. Elhefny; B. Clarke; A. Eilingsfeld; N. Fantinato; J. Knippschild; M. Kröller; S. Malhotra; M. Mühlberg; L. Pfeiffer; Y. Sfindla; N. Skuppin; A. Ramirez; C. Watson; T. Wagner; A. Zakzouk |
| 11:00 AM-1:30 PM, Central Exhibition Hall, TPSTR-ING-09. ING - T-Posters , Traditional Poster, 15th International Conference on Space Operations , Co-Chair: Bang-yeop Kim, kby@kari.re.kr, Korea Aerospace Research Institute; Chair: Young Lee, young.h.lee@jpl.nasa.gov, Jet Propulsion Laboratory | |
| 11:00 AM-1:30 PM | Barbican Project : Launching nuclear wastes into the Sun thanks to railguns. C. Nicolas |
| 11:00 AM-1:30 PM | Student Rocket SERA-3 Flight Data Analysis J. Delpeyrat; E. Kassarian |
| 11:00 AM-1:30 PM | Education for space, a discussion of the relevance to space of operations of education-oriented service based on space sources, both technology and observation. m. gorman |
| 11:00 AM-1:30 PM | ADVANCED SOLAR PROPULSION SYSTEM USING ELECTROMAGNETIC FIELDS A. Singhal |
| 11:00 AM-1:30 PM, Central Exhibition Hall, TPSTR-LRBO-10. LRBO - T-Posters , Traditional Poster, 15th International Conference on Space Operations , Chair: Julio Monreal, julio.monreal@esa.int, European Space Agency (ESA); Co-Chair: Craig Cruzen, craig.cruzen@nasa.gov, NASA Marshall Space Flight Center | |
| 11:00 AM-1:30 PM | Pilot second flight from Australia: a successful stratospheric flight to study polarized emission of interstellar dust M. Saccoccio; J. Bernard |

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| 11:00 AM-1:30 PM | One European launch Base in French Guiana, planning for 3 launchers and more E. Joel |
| 11:00 AM-1:30 PM | Polys light class LV of Yuzhnoye State Design Office development M. Lytvyn |
| 11:00 AM-1:30 PM | Plume effects and flanking station at GSC C. MIRANDA |
| 11:00 AM-1:30 PM | Development and Test of Magnesium-Based Additive for Hybrid Rockets Fuels A. De Morais Bertoldi; M. Bouziane; P. Hendrick; C. Vande Valde; M. Lefebvre; C.G. Veras |
| 11:00 AM-1:30 PM, Central Exhibition Hall, TPSTR-MDM-11. MDM - T-Posters , Traditional Poster, 15th International Conference on Space Operations , Co-Chair: Andrew Monham, andrew.monham@eumetsat.int, EUMETSAT; Co-Chair: Thierry Levoir, thierry.levoir@cnes.fr, CNES | |
| 11:00 AM-1:30 PM | Yuzhnoye State Design Office's Status on Space Debris Mitigation Techniques and Activities M. Kaliapin; J. Lysenko; G. Osinovyy |
| 11:00 AM-1:30 PM | Towards a Cradle-to-Grave, Mission-Wide Simulation System P.F. Maldague; S.S. Wissler |
| 11:00 AM-1:30 PM | Modeling the space environment and its effects on spacecraft and astronauts using SPENVIS S. Calders; N. Messios; E. Botek; F. Da Pieve; E. De Donder; M. Kruglanski; H. Evans; D. Rodgers |
| 11:00 AM-1:30 PM | SNAP TASKING 'Snap Tasking' is the ability to upload an ad hoc requirement for immediate imaging by a satellite. R. Tali |
| 11:00 AM-1:30 PM | The Integration of a Dual-Mission L1 Lagrangian Satellite into an Established Geostationary and Low-Earth Orbit Satellite Operational Framework J.M. Long |
| 11:00 AM-1:30 PM | Compliance Scenario to Japanese laws related the service of commercial earth observation satellites Y. Tabira; K. Matsuta |
| 11:00 AM-1:30 PM | PCDU and battery supports to HAYABUSA2-MASCOT operations C. CENAC-MORTHE; D. Granena; A. Moussi; P. Brochard; E. Duvivier; J. Grundmann; E. Wejmo; K. Sasaki; M. Maibaum; B. Cozzoni; C. Ziach; T. Ho; C. Krause |
| 11:00 AM-1:30 PM, Central Exhibition Hall, TPSTR-OC-12. OC - T-Posters , Traditional Poster, 15th International Conference on Space Operations , Chair: Gérard Galet, gerard.galet@cnes.fr, CNES; Co-Chair: Michael Schmidt, Michael.Schmidt@esa.int, European Space Agency (ESA) -ESOC | |
| 11:00 AM-1:30 PM | COSPAS-SARSAT MEOSAR Early Operational Phase F. Carvalho; D. Delcuvellerie; D. Saouzanet |
| 11:00 AM-1:30 PM | Fully Automatic Operation of Small Satellite REIMEI H. Nagamatsu |

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| 11:00 AM-1:30 PM | Advancing Scheduling Flexibility with On-Orbit Data Rate Testing for GPM P.C. Frazier |
| 11:00 AM-1:30 PM | New concepts and tools for an integrated and paper-free management of the CryoSat-2 Flight Operations Plan and Mission-Control-System Database: analysis, implementation and routine experience. E. Maestroni; j. philip; N. Mardle |
| 11:00 AM-1:30 PM | Magnetospheric Multiscale (MMS) Mission: Surviving Extended Mission Long Eclipse Y.T. Tedla; G. Davis; R. Arocho |
| 11:00 AM-1:30 PM | Options for the Continuing Evolution of the Earth Science Constellation M. Machado; W. Guit; W. Case |
| 11:00 AM-1:30 PM, Central Exhibition Hall, TPSTR-PS-13. PS - T-Posters , Traditional Poster, 15th International Conference on Space Operations , Chair: Martin Wickler, martin.wickler@dlr.de, DLR; Co-Chair: Vladimir Nazarov, Vladimir.Nazarov@cosmos.ru, IKI RAN | |
| 11:00 AM-1:30 PM | Distributed Agent-based Approaches for Multi-Satellite System Limited Coordination Problem Z. Zheng; J. Guo; E. Gill |
| 11:00 AM-1:30 PM | Research on Mission Planning of Intelligent Satellite Constellation C. HAN; L. Yurong; H. Li; W. YU |
| 11:00 AM-1:30 PM | CKVIEW – a multi-mission planning tool K. Matz; T. Roatsch |
| 11:00 AM-1:30 PM, Central Exhibition Hall, TPSTR-SSO-14. SSO - T-Posters , Traditional Poster, 15th International Conference on Space Operations , Chair: Eugene Avenant, eavenant@sansa.org.za, The South African National Space Agency; Co-Chair: Harry Shaw, harry.c.shaw@nasa.gov, NASA-Goddard Space Flight Center | |
| 11:00 AM-1:30 PM | The Proba-3 G-EMCS approach to a highly integrated multi spacecraft Mission Operations and EGSE System featuring SLE and POCKET support R. Messaros; M. Dumitru; M. Novacek |
| 11:00 AM-1:30 PM | CanSat design and their applications P. Chodkaveekityada |
| 11:00 AM-1:30 PM | Electric Propulsion For Small Satellites Orbit Control And Deorbiting : The Example Of A Hall Effect Thruster P. Lascombes |
| 11:00 AM-1:30 PM, Central Exhibition Hall, TPSTR-TKT-15. TKT - T-Poster , Traditional Poster, 15th International Conference on Space Operations , Chair: Sean Burns, sean.burns@eumetsat.int, EUMETSAT; Co-Chair: Michael Schmidhuber, michael.schmidhuber@dlr.de, DLR/GSOC Mission Operations | |
| 11:00 AM-1:30 PM | Lessons Learned from 3 Editions of an Introductory Course in Space Mission Operations T. Boardman; A. Baker; E. Chester; M. Cosby |
| 11:00 AM-1:30 PM | Using IMPRINT to Model Operator Staffing and Workload Considerations in a 24/7 Full-Service Mission Operations Center D. Powers; A.M. Gacy |

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| 11:00 AM-1:30 PM | Introducing Parallelism in Satellite Simulation A. Bobey; B. Rocca |
| 1:30 PM-3:30 PM, Mucem, CAN-01. CAN - Communications, Ground and Space Networking I , Technical Paper, 15th International Conference on Space Operations , Chair: Andrew Downen, andrew.z.downen@jpl.nasa.gov, Jet Propulsion Laboratory; Co-Chair: Takahiro Yamada, tyamada@isas.jaxa.jp, JAXA/ISAS | |
| 1:30-2:00 PM | Update on NASA's Laser Communications Relay Demonstration Project B.L. Edwards; D.J. Israel |
| 2:00-2:30 PM | Simulation and Analysis of Opportunistic MSPA for Multiple Cubesat Deployments Z.J. Towfic; D. Heckman; D. Morabito; R. Rogalin; C. Okino; D.S. Abraham |
| 2:30-3:00 PM | In-Situ Navigation and Timing Services to prepare for a Human Mars Landing Site K. Cheung; C. Lee |
| 3:00-3:30 PM | Carrier Phase Synchronization Techniques at Very Low SNR for Deep Space Missions M. Jhaidri; A. Thomas; C. Laot |
| 1:30 PM-3:30 PM, Saint-Jean, CSIS-01. CSIS - Transport, Exchange, and Preservation of Space Data , Technical Paper, 15th International Conference on Space Operations , Chair: Kevin Marston, kevin.marston@eumetsat.int; Co-Chair: Wallace Tai, wallace.s.tai@jpl.nasa.gov, Jet Propulsion Laboratory | |
| 1:30-2:00 PM | One Standard to Rule Them All: the Tailoring of PUS-C for Future ESA Missions I. Clerigo; A. Accomazzo; P. Collins; N. Mardle; E. Montagnon; J. Morales-Santiago; I. Tanco |
| 2:00-2:30 PM | Implementation of the PUS services for the ISIS product line – Fit for the first missions? C. Laroque; C. Samitier |
| 2:30-3:00 PM | A GUI XTCE data preparation tool and its application in the SVOM CSC F. Liu; M. Huang |
| 3:00-3:30 PM | Digital Preservation Archives – A New Future Architecture for Long-term Interoperability M.W. Kearney; D. Giaretta; J. Garrett; S. Hughes |
| 1:30 PM-3:30 PM, Lacydon, GSE-01. GSE - Ground Segment Architectures, Design and Validation I , Technical Paper, 15th International Conference on Space Operations , Chair: Yunus Bhayat, ybhayat@sansa.org.za, South African National Space Agency; Co-Chair: Corey OMeara, corey.omeara@dlr.de, DLR- German Aerospace Center | |
| 1:30-2:00 PM | Ground Enterprise Evolution at NESDIS S.R. Petersen |
| 2:00-2:30 PM | Lessons learnt developing telemetry analysis software reused throughout the OSIRIS-Rex Laser Altimeter instrument development, integration and testing on spacecraft and operations. C. Brunet |

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| 2:30-3:00 PM | ExoMars 2020: Rover Operations Control System Design as part of the Rover Operations Control Center (ROCC) F. Martinez Fadrique; R. Sánchez-Beato Fernández; M. Barrera; P. Franceschetti; L. Joudrier |
| 3:00-3:30 PM | A Flexible Control Center Architecture for Support of Diverse Spaceflight Missions J.C. Differding; B.P. Stamper |
| 1:30 PM-3:30 PM, Joliette, ING-01. ING - Inspiring Next Generation I , Technical Paper, 15th International Conference on Space Operations , Co-Chair: Dong-Gyu Kim, davekim@kari.re.kr, Korea Aerospace Research Institute; Chair: Alessandro Ercolani, alessandro.ercolani@esa.int, European Space Agency (ESA) | |
| 1:30-2:00 PM | Air meets Space: A strong Combination for coping with future Challenges of joint Airspace Use of Airplanes and Space Vehicles. C. Arbinger; W. Päßgen |
| 2:00-2:30 PM | Operations Technology, Out of the Box, into the Future A. Donati; R. Boumghar |
| 2:30-3:00 PM | Inspiring the next generation in the space operations community C. Cocchiara; S. Wan |
| 3:00-3:30 PM | Operational Benefit and Applicability of a 3D Printer in Future Human Mars Missions - Results from Analog Testing M. Müller; M. Coen; D. Kim; R. Campbell; S. Gruber; M. Brady; S. Fairleigh; B.J. Morrell; G. Chamitoff |
| 1:30 PM-3:30 PM, Grand Large, MDM-01. MDM - Mission Simulation and Modeling , Technical Paper, 15th International Conference on Space Operations , Co-Chair: Andrew Monham, andrew.monham@eumetsat.int, EUMETSAT; Co-Chair: Sami Asmar, sami.asmar@jpl.nasa.gov, Jet Propulsion Laboratory | |
| 1:30-2:00 PM | A System for Collaborative Design, Analysis, and Optimization of Spacecraft Trajectories J. Arrieta |
| 2:00-2:30 PM | Ant Colony Optimization based design of multiple-target active debris removal mission T. Zhang; H. Shen; H. Li; J. Li |
| 2:30-3:00 PM | Robust Crater Matching and Tracking Algorithm for Autonomous Optical Navigation of a Planetary Lander K. Kim; Y. Jung; H. Bang |
| 3:00-3:30 PM | Europa Lander Concept: High fidelity system modeling informing flight system and concept of operations years before launch C.R. Lawler; S.S. Wissler; T.P. Kulkarni; E.W. Ferguson; P. Maldague |
| 1:30 PM-3:30 PM, Estaque, OC-01. OC - Flight Operations Concepts I , Technical Paper, 15th International Conference on Space Operations , Chair: Robert Morgenstern, Rob.Morgenstern@nasa.gov, NASA Goddard Space Flight Center; Co-Chair: Armin Hauke, armin.hauke@dlr.de | |

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| 1:30-2:00 PM | Euclid pointing performance: operations for the Fine Guidance Sensor reference star catalogue A. Bosco; A. Bacchetta; M. Saponara; G. Saavedra Criado |
| 2:00-2:30 PM | What it has been like to fly and operate Europe's ocean and land watcher, Copernicus Sentinel 3 T. Francisco; e. trollope; d. montero; L. Ventimiglia; A. Argemandy |
| 2:30-3:00 PM | EarthCARE Flight Operations – A Challenging Concept to meet a Challenging Mission T. Ormston; N. Mardle |
| 3:00-3:30 PM | MASCOT – a Mobile Lander on-board Hayabusa2 Spacecraft – Status and Operational Concept for the Asteroid Ryugu C. Krause; U. Auster; J. Bibring; j. biele; C. Cénac-Morthé; B. Cozzoni; C. Dudal; D. Embacher; C. Fantinati; H. Fischer; K. Glassmeier; D. Granena; M. Grott; J. Grundmann; V. Hamm; D. Hercik; T. Ho; R. Jaumann; K. Kayal; J. Knollenberg; O. Küchemann; C. Lange; L. Lorda; M. Maibaum; D. May; A. Moussi; T. Okada; J. Reill; T. Saiki; K. Sasaki; S. Markus; N. Schmitz; n. termtanasombat; Y. Tsuda; S. Ulamec; T. Yoshimitsu; C. Ziach |
| 1:30 PM-3:30 PM, Notre Dame, TKT-01. TKT - Simulation Methods and Tools , Technical Paper, 15th International Conference on Space Operations , Chair: Michael Schmidhuber, michael.schmidhuber@dlr.de, DLR/GSOC Mission Operations; Co-Chair: Jonathan McAuliffe, watch.n.learn@gmail.com | |
| 1:30-2:00 PM | A novel concept for thermal simulation in spacecraft simulators J. Baroukh; F. Manon; G. Mas; H.M. Pasquier; T. François; S. DESCHAMPS; H. Cortes |
| 2:00-2:30 PM | Reliable Sequencing for the Long-Lived Voyager Mission A. Ko; L. Yang |
| 2:30-3:00 PM | OrbitSim – An Advanced 3D Visualization Training Tool A. Stöcker |
| 3:00-3:30 PM | Improving functional validation through analyses of operational problems N. Di Nisio; O. Page |
| 4:00 PM-6:00 PM, Mucem, CAN-02. CAN - Communications, Ground and Space Networking II , Technical Paper, 15th International Conference on Space Operations , Chair: Leslie Deutsch, leslie.j.deutsch@jpl.nasa.gov, Jet Propulsion Laboratory; Co-Chair: Andrew Downen, andrew.z.downen@jpl.nasa.gov, Jet Propulsion Laboratory | |
| 4:00-4:30 PM | Modeling Deep Space Communications Requirements for Future Crewed Missions to Mars B.E. MacNeal; D. Heckman; M. Sanchez Net; K. Tran; D.S. Abraham; J. Wu; A. Kwok; C. Lee; K. Cheung |
| 4:30-5:00 PM | Deep Space Relay Terminals for Mars Superior Conjunction J. Breidenthal; H. Xie; M. Jesick; C. Lau |
| 5:00-5:30 PM | A Ka-band Hybrid Ground/Space Communications Network for SmallSats B. Chandler |

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| 5:30-6:00 PM | Space and Earth Terminal Sizing for Future Mars Missions J. Breidenthal; H. Xie; C. Lau; B. MacNeal |
| 4:00 PM-6:00 PM, Saint-Jean, CSIS-02. CSIS - Assets and Protocols for Simple and Networked Space Communications , Technical Paper, 15th International Conference on Space Operations , Chair: Eduardo Bergamini, e.w.bergamini@uol.com.br, Instituto Nacional de Pesquisas Espaciais; Co-Chair: Michael Kearney, KearneySolutions@gmail.com | |
| 4:00-4:30 PM | Layered Approach As Key Point For CCSDS Standardization G. Calzolari |
| 4:30-5:00 PM | The Utilization Profiles of the CCSDS Unified Space Link Protocol (USLP) G. Kazz; E. Greenberg |
| 5:00-5:30 PM | Next Generation Relay Services at Mars via an International Relay Network R.E. Gladden; G. Kazz; S. Burleigh; C.D. Edwards; D. Wenkert |
| 5:30-6:00 PM | NASA's Deep Space Network and ESA's Tracking Network Strategic Partnership to Enable Solar System Exploration S. Asmar; D. Firre; A. Accomazzo; A. Bhanji; P. Ferri; J. Hudiburg; P. Liebrecht; G. Morse; G. Mann |
| 4:00 PM-6:00 PM, Lacydon, GSE-02. GSE - Ground Segment Architectures, Design and Validation II , Technical Paper, 15th International Conference on Space Operations , Chair: christian surace, christian.surace@lam.fr; Co-Chair: Aage-Raymond Riise, age-raymond.riise@esa.int, European Space Agency | |
| 4:00-4:30 PM | Hayabusa2 ground operation systems for Asteroid Proximity Operation A. Fujii |
| 4:30-5:00 PM | File based Operations, CFDP Assembly and Euclid C.R. Haddow; H. Dreihahn; F. Flentge; F. Keck; M. Schmidt |
| 5:00-5:30 PM | Euclid Science Ground Segment (SGS) Processing Operations Concept M. Poncet; C. Dabin; G. Buenadicha; J. Hoar; A. Zacchei; M. Sauvage |
| 5:30-6:00 PM | The Cassini/Huygens Navigation Ground Data System: Design, Implementation, and Operations. R. Beswick |
| 4:00 PM-6:00 PM, Joliette, ING-02. ING - Inspiring Next Generation II , Technical Paper, 15th International Conference on Space Operations , Chair: Young Lee, young.h.lee@jpl.nasa.gov, Jet Propulsion Laboratory; Co-Chair: Chiara Cocchiara, chiara.cocchiara@eumetsat.int | |
| 4:00-4:30 PM | CNES actions for higher education D. Hubert |
| 4:30-5:00 PM | Education Outreach at NASA Goddard Space Flight Center H. Shaw; S. Vilevac; S. Vithlani; C. Crichton; M. Weiss |

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| 5:00-5:30 PM | Educational Outreach and International Collaboration Through ARISS ---Amateur Radio on the International Space Station F.H. Bauer; R. White; D. Taylor |
| 5:30-6:00 PM | Designing Operations of a Crewed Mission to Mars in a Classroom Environment S. Borissov; N. McHenry; K. Spira; B.J. Morrell; M. Coen; G. Chamitoff |
| 4:00 PM-6:00 PM, Grand Large, MDM-02. MDM - Mission Design and Management , Technical Paper, 15th International Conference on Space Operations , Co-Chair: Frank Perlik, frank.perlik@eumetsat.int, EUMETSAT; Co-Chair: Pierre-Yves Guidotti, pierre-yves.guidotti@cnes.fr, CNES | |
| 4:00-4:30 PM | Metop-A Mission Extension: Surviving and Exploiting a Drifting Orbit R. Dyer; P. Righetti |
| 4:30-5:00 PM | Reliability Model Supporting Satellite Life Extension and Disposal Operations Initiation L. Bitetti; B.B. Ratti; R. Destefanis; A. Harrison Sanchez |
| 5:00-5:30 PM | SAR/GALILEO SERVICE OPERATIONS IN SUPPORT TO THE INTERNATIONAL COSPAS-SARSAT PROGRAMME C. SCALEGGI; F. CARVALHO; X. MAUFROID |
| 5:30-6:00 PM | European GNSS Agency Service Provision Plan for Galileo services D. SYLVAIN; G. Pont; R. Da Costa; R. Clivio |
| 4:00 PM-6:00 PM, Estaque, OC-02. OC - Operations Automation and Optimization I , Technical Paper, 15th International Conference on Space Operations , Chair: dominique montero, dominique.montero@eumetsat.int, EUMETSAT; Co-Chair: Christophe Marechal, christophe.marechal@cnes.fr, CNES | |
| 4:00-4:30 PM | How to apply AI and Automatic into Mission Operation B. Meng; D. Li |
| 4:30-5:00 PM | Spacecraft Operations: Defining the Avanti Way M. Fogg; M. Loveday; A. Williams; L. Edge; S. Moore |
| 5:00-5:30 PM | In Flight Evolution of Onboard Automation on ESA's Gaia Mission D.J. Milligan; P. Collins; J. Marie |
| 5:30-6:00 PM | The Evolution of ICD's for Spacecraft Command and Control C. Ostrum; E. Brenner; A.T. Jordan; R. Proctor |
| 4:00 PM-6:00 PM, Notre Dame, TKT-02. TKT - Human Factor and Behaviors , Technical Paper, 15th International Conference on Space Operations , Chair: Sean Burns, sean.burns@eumetsat.int, EUMETSAT; Co-Chair: Stephanie Wan, stephanie.wan@nasa.gov | |
| 4:00-4:30 PM | Preparing to Assure Mission Success P.D. Lock; G.B. Faris; B.C. Waggoner; L. Bryant |
| 4:30-5:00 PM | Psychology of Cyberattacks – A journey into a Hackers mind K.R. Noetzel |

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| 5:00-5:30 PM | Training for Analog Mars Simulations L. Zanardini; G. Grömer; J. Lousada; S. Paternostro |
| 5:30-6:00 PM | ETHOLOGICAL APPROACH OF THE HUMAN FACTORS FROM SPACE MISSIONS TO SPACE OPERATIONS C. TAFFORIN; G. Galet; S. Michel |

Tuesday, May 29, 2018

| Time | Session or Event Info |
|---|---|
| 10:30 AM-12:30 PM, Mucem, CAN-03. CAN - Communications, Ground and Space Networking III , Technical Paper, 15th International Conference on Space Operations , Chair: Osvaldo Peinado, osvaldo.peinado@dlr.de, DLR; Co-Chair: Carole Boyles, carole.a.boyles@jpl.nasa.gov, Jet Propulsion Laboratory | |
| 10:30-11:00 AM | Mars Planetary Network for Human Exploration Era – Potential Challenges and Solutions W.S. Tai; D.S. Abraham; K. Cheung |
| 11:00-11:30 AM | Recording and Replay System for PSK Modulated RF Signals Using a Compressive Sensing Technique Y. Kim; J. Park; S. Kim; H. Oh; s.ahn |
| 11:30-12:00 PM | Sizing of telecommand rate performance for managing science data retransmission over an unreliable channel M. Lanucara |
| 12:00-12:30 PM | Study of a full software CCSDS receiver A. Thomas; j. leveau; s. Augarde |
| 10:30 AM-12:30 PM, Saint-Jean, CSIS-03. CSIS - Management and Enabling of Spacecraft Services , Technical Paper, 15th International Conference on Space Operations , Co-Chair: François LASSERE, francois.lassere@cnes.fr, CNES; Co-Chair: Aage-Raymond Riise, age-raymond.riise@esa.int, European Space Agency | |
| 10:30-11:00 AM | CCSDS Service Management - Prototyping and Preliminary Implementation at ESOC C.R. Haddow; H. Dreihahn; M. UNAL |
| 11:00-11:30 AM | Ground MO Adapter: Enabling CCSDS MO Technology on Ground C. Coelho; M. Sarkarati; M. Merri; O. Koudelka |
| 11:30-12:00 PM | End-to-End Simulation of On-Orbit-Servicing: Technical implementation of communications D. Weber; M. Gnat; C. Garcia Acero; A. Hauke; F. Huber |
| 12:00-12:30 PM | Enabling Technologies for Deep Space Motion Imagery R.P. Grubbs |
| 10:30 AM-12:30 PM, Lacydon, GSE-03. GSE - Ground Segment Architectures, Design and Validation III , Technical Paper, 15th International Conference on Space Operations , Chair: Gareth Williams, gareth.williams@eumetsat.int, EUMETSAT; Co-Chair: Navid Dehghani, Navid.Dehghani@jpl.nasa.gov, Jet Propulsion Laboratory | |

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| 10:30-11:00 AM | SJ10 Satellite System Test and Verification Platform of Mission Operation Center z. wei |
| 11:00-11:30 AM | Ground segment solutions for nanosatellite missions P. Cros; N. FROUVELLE; R. Alacevich |
| 11:30-12:00 PM | Multi-Mission Nanosatellite Ground Segment Services based on Mission Operation and Information Management Services A. Di Salvo; G. Lo Verde; G. Izzo; F. Menichetti |
| 12:00-12:30 PM | Preliminary Design of KPLO Deep-Space Ground System D. Kim; B. Kim |
| 10:30 AM-12:30 PM, Joliette, HSO-01. HSO - Exploration Architectures and Concepts , Technical Paper, 15th International Conference on Space Operations , Chair: Thomas Mueller, th.mueller@dlr.de, DLR; Co-Chair: Mark Lupisella, mark.l.lupisella@nasa.gov, NASA -Goddard Space Flight Center | |
| 10:30-11:00 AM | A Gliding Vehicle for ISS Crew Rescue - Mission Operational Concept G. Di Campli Bayard de Volo; F. Di Pietro |
| 11:00-11:30 AM | Space Endeavors via Moon and Mars – SpaceOps Workshop 2017 Summary J.I. Statman; M. Sarkarati; V. Reggestad; M. Merri; S. Vitalpur; C.L. Moore; J. Trimble; A. zakharov; N. Eysmont; F. Korotkov |
| 11:30-12:00 PM | Deep Space Gateway Operations Concept K.M. Coderre; D. Richey; T. Cichan; W. Pratt |
| 12:00-12:30 PM | Application of a Double Door as Berthing Docking Mechanisms for Space Vehicles P. Humphries; F. Barez; A. Gutti Shashidhar Gowda |
| 10:30 AM-12:30 PM, Estaque, LRBO-01. LRBO - Interactive - Launch Vehicle Operations I , Technical Paper - Interactive, 15th International Conference on Space Operations , Chair: Julio Monreal, julio.monreal@esa.int, European Space Agency (ESA); Co-Chair: Craig Cruzen, craig.cruzen@nasa.gov, NASA Marshall Space Flight Center | |
| 10:30-11:00 AM | Ground operations concept for Altair, Europe's future airborne launch service for payloads between 50-250 kg C. ARNODO; L. Appolloni; E. Diez |
| 11:00-11:30 AM | PLD Space' Arion 2 micro-launcher; simplifying and improving the responsiveness in launch operations. R. Torres; F. García |
| 11:30-12:00 PM | BLOOSTAR, THE ENABLER FOR MORE EFFICIENT SATELLITES IN LOW EARTH ORBIT J. López Urdiales; I. Peris Marti; G. Girard |
| 12:00-12:30 PM | Open Discussion |
| 10:30 AM-12:30 PM, Grand Large, MDM-03. MDM - Interactive - Mission Simulation and Modeling , Technical Paper - Interactive, 15th International Conference on Space Operations , Co-Chair: Sami Asmar, sami.asmar@jpl.nasa.gov, Jet Propulsion Laboratory; Co-Chair: Andrew Monham, andrew.monham@eumetsat.int, EUMETSAT | |

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| 10:30-11:00 AM | Improving Spacecraft Design and Operability for Europa Clipper through High-Fidelity Mission-Level Modeling and Simulation E.W. Ferguson; S.S. Wissler; J. Ludwinski; B.K. Bradley; C.R. Lawler; P. Maldague |
| 11:00-11:30 AM | Simulation of JUICE Science Data Flow :Event Driven Models for Rapid-prototyping A. CORTIER; E. Ecale |
| 11:30-12:00 PM | Driving at the Lunar Poles: Simulations for Mission Design R. Carvalho; M. Deans; J. Trimble |
| 12:00-12:30 PM | Open Discussion |
| 10:30 AM-12:30 PM, Notre Dame, TKT-03. TKT - Interactive - Advanced Concepts for Training , Technical Paper - Interactive, 15th International Conference on Space Operations , Co-Chair: Michael Schmidhuber, michael.schmidhuber@dlr.de, DLR/GSOC Mission Operations; Chair: Sean Burns, sean.burns@eumetsat.int, EUMETSAT | |
| 10:30-11:00 AM | SpaceCRAFT: A Virtual Reality Sandbox and Open-Source Mission Simulation Platform N. McHenry; R. Hogan; M. Coen; M. Holub; B.J. Morrell; G. Chamitoff |
| 11:00-11:30 AM | AR/VR Transition for Spaceflight Training M. Izygon |
| 11:30-12:00 PM | Self-Customized Just In Time Training for Telerobotic Operations in Long Duration Spaceflight I. Grewal; A.M. Liu; C. Oman; S.K. Robinson |
| 12:00-12:30 PM | Open Discussion |
| 1:30 PM-3:30 PM, Mucem, CAN-04. CAN - Communications, Ground and Space Networking IV , Technical Paper, 15th International Conference on Space Operations , Chair: Andrew Downen, andrew.z.downen@jpl.nasa.gov, Jet Propulsion Laboratory; Co-Chair: Osvaldo Peinado, osvaldo.peinado@dlr.de, DLR | |
| 1:30-2:00 PM | Four years operations of Inter-satellite (ISLs) and Space-Ground (SGLs) Optical links P. Martin Pimentel; D. Troendle; N. Hoepcke; F. Heine; M. Motzigemba; S. Martin; E. Benzi; G. Rossmanith; M. James |
| 2:00-2:30 PM | Weather forecast for BepiColombo operations at Ka-band M. Montagna; E. Montagnon |
| 2:30-3:00 PM | Alphasat, Sentinel-1A/B, Sentinel-2A/B, and EDRS, Paving the Way for Systematic Optical Data Transfer for Earth Observation Missions E. Benzi; D.C. Troendle; M. James |
| 3:00-3:30 PM | On-board terminal developments and operations of optical ground networks for small satellites P. Hyvönen; A. Vidmark; L. Francou; G. Baister |

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| 1:30 PM-3:30 PM, Saint-Jean, DM-01. DM - Cyber Security for Space Operations , Technical Paper, 15th International Conference on Space Operations , Chair: David LaVallee, david.lavallee@jhuapl.edu, The Johns Hopkins University Applied Physics Laboratory; Co-Chair: Mariella Spada, mariella.spada@esa.int, European Space Agency (ESA) | |
| 1:30-2:00 PM | Building blocks to support implementation of a secure system engineering lifecycle at ESA D. Fischer; M. Spada |
| 2:00-2:30 PM | Introducing Accountability in Space Operations J. Vivero; R. Marin |
| 2:30-3:00 PM | A necessary evolution of space ground segments cyber security : impacts from design to operations. J. Airaud |
| 3:00-3:30 PM | Space Mission Data Provenance Traceability Y. Qu; H. Wu; T. Liu; Y. Zhao |
| 1:30 PM-3:30 PM, Lacydon, GSE-04. GSE - Ground Segment Architectures, Design and Validation IV , Technical Paper, 15th International Conference on Space Operations , Chair: Corey OMeara, corey.omeara@dlr.de, DLR- German Aerospace Center; Co-Chair: christian surace, christian.surace@lam.fr | |
| 1:30-2:00 PM | Ground Test for Autonomous Optical Navigation System of Planetary Lander Using Augmented Reality Y. Jung; Y. Na; K. Kim; H. Bang |
| 2:00-2:30 PM | The Observation Link Test System for ground test engineering and data management J. Park |
| 2:30-3:00 PM | CNES Multi-mission stations : on the way to automation of maintenance B. Mametsa |
| 3:00-3:30 PM | Next generation of Integrated Modem and Baseband Unit (IMBU MK-IV) Ground Segment validation tool J. Vilà; J. Manuel Cebrian; J. Batlle; T. Carles; I. Vega; S. Marti; L. Santos |
| 1:30 PM-3:30 PM, Joliette, HSO-02. HSO - Human-Robotic Exploration , Technical Paper, 15th International Conference on Space Operations , Chair: Austin Gosling, Austin.Gosling@insyen.com; Co-Chair: Michael Squire, Michael.D.Squire@nasa.gov, NASA Langley Research Center | |
| 1:30-2:00 PM | Crew-assisted robotic operations for Moon village scenarios T.B. Rinnan; K. Nergaard; A. Cowley; F. Nicolini |
| 2:00-2:30 PM | Low-Latency Teleoperations: Operational Implications for Human Space Exploration M.L. Lupisella |
| 2:30-3:00 PM | ASTRONAUT-ROBOT INTERACTION FOR COOPERATIVE MANIPULATION ON EXTRATERRESTRIAL SURFACES : OBJECT TRANSFER TO ONE ANOTHER THROUGH VISUAL SERVOING AND GESTURE CONTROL P.N. Vyshnav |
| 3:00-3:30 PM | The Network Infrastructure for the ROBEX Demomission Space S. Völk; A. Kimpe; A. Wedler; M. Knapmeyer; F. Sohl; A. Heffels; L. Witte; C. Lange; R. Rosta; N. Toth; P. Kyr; M. Wilde |

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| 1:30 PM-3:30 PM, Estaque, LRBO-02. LRBO - Launch Vehicle Operations II, Technical Paper, 15th International Conference on Space Operations , Chair: Alan DeLuna, alan@atdl-inc.com, ATDL, Inc.; Co-Chair: Pier Michele ROVIERA, pier.michele.roviera@esa.int, ESA - European Space Agency | |
| 1:30-2:00 PM | Ariane 6 Launch System Operational Concept - Main Drivers P. Resta; B. Pouffary; J.A. Monreal; S. Lemerrier; A. Decadi; E. Arnoud |
| 2:00-2:30 PM | Flight System Integration and Test: Lessons Learned for Future Success M.R. Wright |
| 2:30-3:00 PM | Baikonur Proton Launch Operations J.R. Youdale; K. Sloan |
| 3:00-3:30 PM | One step further towards a European launch capability for small satellites – SmallSat Express A. Ytterskog; A. Rathsmann; P. Pahlsson |
| 1:30 PM-3:30 PM, Grand Large, MDM-04. MDM - Mission Engineering and Planning, Technical Paper, 15th International Conference on Space Operations , Co-Chair: Frank Perlik, frank.perlik@eumetsat.int, EUMETSAT; Co-Chair: Marc Niezette, marc.niezette@telespazio-vega.de, Telespazio VEGA Deutschland GmbH | |
| 1:30-2:00 PM | Successful MOS Innovation Characteristics D.A. Bliss; D.L. Bindschadler |
| 2:00-2:30 PM | Terrain-based Analysis as a Design and Planning Tool for Operations of a Lunar Exploration Rover for the TeamIndus Lunar Mission M. Menon; A. Kothandhapani; N. Sundaram; V. Raghavan |
| 2:30-3:00 PM | The “Next Generation Gravity Mission”: challenges and consolidation of the system concepts and technological innovations S. Dionisio; A. Anselmi; L. Bonino; S. Cesare; L. Massotti; P. Silvestrin |
| 3:00-3:30 PM | ASTOS, a reconfigurable software for design of mega constellations, operation of Flying Laptop and end-of-life disposal F. Cremaschi; S. Weikert; V. Zuccarelli; S. Schäff; A. Dobler |
| 1:30 PM-3:30 PM, Notre Dame, PS-01. PS - New Techniques and Planning Software I, Technical Paper, 15th International Conference on Space Operations , Chair: Martin Wickler, martin.wickler@dlr.de, DLR; Co-Chair: Thomas Ormston, thomas.ormston@esa.int, European Space Agency | |
| 1:30-2:00 PM | AI Support for future mission operations: The case of BepiColombo On-board Memory Management N. Policella; S. Fratini; A. Donati; S. de la Fuente; M. Casale |
| 2:00-2:30 PM | Ant-based Mission Planning: Two Examples E.V. Ntagiou; C. Iacopino; N. Policella; R. Armellini; A. Donati |
| 2:30-3:00 PM | An Empirical Study of Heuristic Rules on the Performance of Agile Earth Observing Satellite Scheduling Algorithms B. Song; Y. Chen; Y. Chen |

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| 3:00-3:30 PM | CSG planning solutions for system resources management and optimization to increase the user services T. Scopa; S. Mari; G. De Luca; C. Fiorentino; S. Robbio; D. Calabrese; A. Cricenti |
| 4:00 PM-6:00 PM, Mucem, CAN-05. CAN - Communications, Ground and Space Networking V , Technical Paper, 15th International Conference on Space Operations , Chair: Olivier de Beaumont, olivier.debeaumont@cnes.fr, CNES; Co-Chair: Carole Boyles, carole.a.boyles@jpl.nasa.gov, Jet Propulsion Laboratory | |
| 4:00-4:30 PM | Development of the "Infinity Service", a data-centric ground network service with high capacity for small satellites and large constellations P. Hyvönen; M. Andersson; M. Tyni; M. Liljeblad; J. Alvarez; D. Massey |
| 4:30-5:00 PM | Allocation of Deep Space Network Ground System Tracking and Communications Assets During the 2020-2021 Timeframe of the "Mars Armada" S.M. Lichten; D.S. Abraham; B. Arroyo; S.W. Asmar; J. Bell; C.D. Edwards |
| 5:00-5:30 PM | Space Mobile Network User Demonstration Satellite (SUDS) for a practical on-orbit demonstration of User Initiated Services H. Shaw; J. King; D.J. Israel; J. Kang; C. Roberts |
| 5:30-6:00 PM | HAPs Operations and Service provision in Critical Scenarios P. Di Vito; D. Fischer; M. Spada; R. Rinaldo; L. Duquerroy |
| 4:00 PM-6:00 PM, Saint-Jean, DM-02. DM - Big Data Applications , Technical Paper, 15th International Conference on Space Operations , Co-Chair: Kevin Marston, kevin.marston@eumetsat.int; Chair: Daniel Fischer, daniel.fischer@esa.int, European Space Agency (ESA) -ESOC | |
| 4:00-4:30 PM | Data science DevOps using Big Data platforms for spacecraft operations S. Kaethler; R. Santos |
| 4:30-5:00 PM | Scheduling of operations in big data processing center for Gaia mission C. PANEM; A. Jean-Antoine-Piccolo; F. PAILLER |
| 5:00-5:30 PM | Big Data Based Operations for Space Systems L. Boussof; B. Bergelin; D. Scudeler; H. Graydon; J. Stamminger; P. Rosnet; E. Taillefer; C. Barreyre |
| 5:30-6:00 PM | OCO-2 Experience with Big Data and Big Data Systems L. Dang; C. Cheng; R. Schneider; J. Yoshimizu |
| 4:00 PM-6:00 PM, Grand Large, DM-03. DM - Data Systems Development , Technical Paper, 15th International Conference on Space Operations , Chair: Robert Carvalho, robert.e.carvalho@nasa.gov, NASA Ames Research Center; Co-Chair: Klara Widegard, klara.widegard@esa.int | |
| 4:00-4:30 PM | Open Source Mission Operations Software: Community & Collaboration J. Trimble; A. Henry |

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| 4:30-5:00 PM | Open Framework To Foster Collaboration For Fast Development And Improvement Of Autonomous Multi-Robot Navigation and Exploration Missions R. Boumghar; S. Fratini; T. Nogueira; A. Donati |
| 5:00-5:30 PM | The CNES X-band data processing system on the way for future missions F. Nayrac; S. Marliere |
| 5:30-6:00 PM | Operational qualification of scientific pipeline in big data processing center for Gaia mission J. GUIRAUD |
| 4:00 PM-6:00 PM, Lacydon, GSE-05. GSE - Ground Segment Architectures, Design and Validation V , Technical Paper, 15th International Conference on Space Operations , Chair: Armin Hauke, armin.hauke@dlr.de; Co-Chair: Marc Niezette, marc.niezette@telespazio-vega.de, Telespazio VEGA Deutschland GmbH | |
| 4:00-4:30 PM | EMM's GSCN: International Collaboration for Network Integration B.A. Stroozas; A. Alrais; M. Alloghani; M. Alblooshi; R. Aldallal; M. Bester |
| 4:30-5:00 PM | The ESOC End-to-End Ground Segment Reference Facility J. BERTON; K. Widegard; M. Spada; E. Gomez Gomez; C. Smith |
| 5:00-5:30 PM | Return Link Service Provider (RLSP) Acknowledgement Service to confirm the detection and localization of the SAR Galileo alerts M. Fontanier; H. Ruiz; C. Scaleggi |
| 5:30-6:00 PM | AUDREE-NG : Thales Alenia Space AIT procedure execution solution N. Richasse; L. Cohen; P. Lacherez |
| 4:00 PM-6:00 PM, Joliette, HSO-03. HSO - ISS Operations , Technical Paper, 15th International Conference on Space Operations , Chair: Thomas Mueller, th.mueller@dlr.de, DLR; Co-Chair: Mark Lupisella, mark.l.lupisella@nasa.gov, NASA-Goddard Space Flight Center | |
| 4:00-4:30 PM | REMOTE ECHOGRAPHY between CNES Space Control Center and the ISS using TELE oPERATED "ECHOGRAPH with MOTORIZED PROBE". Application in isolated medical centre on Earth. P. ARBEILLE; D. CHAPUT; A. DEPRIESTER; O. BELBIS; A. MAILLET; P. BENARROCHE; S. BARDE |
| 4:30-5:00 PM | Astrobee: A New Tool for ISS Operations M.G. Bualat; T. Smith; E.E. Smith; C. Provencher; T. Fong |
| 5:00-5:30 PM | The Development of Image-based HTV Exposed Pallet(EP) Translation Calculator(IHTC) for the Robotic Berthing Operation of HTV EP by HTV Berthing Camera System(HBCS) Y. Tomita; T. Uchiyama |
| 5:30-6:00 PM | CADMOS: the French USOC. From a Quarter Century History to New Prospects M. Augelli |

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| 4:00 PM-6:00 PM, Estaque, OC-03. OC - Operations Engineering and Validation , Technical Paper, 15th International Conference on Space Operations , Chair: Christophe Marechal, christophe.marechal@cnes.fr, CNES; Co-Chair: Michelangelo Ambrosini, michelangelo.ambrosini@gmail.com, EUMETSAT | |
| 4:00-4:30 PM | Tandem operations preparation for Sentinel-3 A/B: paving the way for C/D models M. Romanazzo; J. Morales-Santiago; L. Jauregui; P. Emanuelli |
| 4:30-5:00 PM | Model Based approach for test and operations procedures R. de FERLUC; G. Garcia; F. Bergomi |
| 5:00-5:30 PM | Automated Verification of Satellite Control Ground Operation Procedures E. Tronci; A. Di Salvo; E. Pullara |
| 5:30-6:00 PM | Satellite Flight Operational Procedures: a flexible solution to accommodate both product line genericity and specific customers' needs B. Chauvin; P. Virelizier; A. Millet; V. Lalanne; B. Kircher; C. Borrett |
| 4:00 PM-6:00 PM, Notre Dame, PS-02. PS - New Techniques and Planning Software II , Technical Paper, 15th International Conference on Space Operations , Chair: Maria Wörle, maria.woerle@dlr.de, DLR - Deutsches Zentrum f. Luft- u. Raumfahrt e.V.; Co-Chair: Vladimir Nazarov, Vladimir.Nazarov@cosmos.ru, IKI RAN | |
| 4:00-4:30 PM | Planning Tools: Editing and Cross-validating Planning Configuration S. de la Rosa Steinz; R. Steel; E. Noreus; D. Werner; C.R. Haddow |
| 4:30-5:00 PM | A Mission Planning System for a Low Cost Multi-Customer Constellation Imaging Service C. Iacopino; S. Harrison; A. Brewer |
| 5:00-5:30 PM | Custom TDRSS Scheduling Tools for Mission Extension M. Muszynski; C.J. LaBonde |
| 5:30-6:00 PM | Generic Planning Tool for payload operations/preperations K. Struyven; N. Brun; A. Diaz |

Wednesday, May 30, 2018

| Time | Session or Event Info |
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| 10:30 AM-12:30 PM, Mucem, CAN-06. CAN - Ground Communications , Technical Paper, 15th International Conference on Space Operations , Chair: Marco Lanucara, marco.lanucara@esa.int; Co-Chair: Klaus-Juergen Schulz, klaus-juergen.schulz@esa.int, European Space Agency (ESA) -ESOC | |
| 10:30-11:00 AM | Recommendations Emerging from an Analysis of NASA's Deep Space Communications Capacity D.S. Abraham; Y. Chen; D. Heckman; A. Kwok; C. Lee; B. MacNeal; K. Tran; J. Wu |

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| 11:00-11:30 AM | NASA's launch communications ground segment for the 21st century Florida spaceport C. Roberts; R.N. Tye; D. McCormick; D. Carter; J. Hudiburg; P. Peskett; P. Celeste; T. Perrotto |
| 11:30-12:00 PM | Hot-Redundant Ground Station Configuration for Jason-2 and Jason-3 Operations M. Tahtadjiev |
| 12:00-12:30 PM | Radio-hosted Flight / Ground Interface for Operations Standardization C. Grasso; R. Lock; P.D. Lock |
| 10:30 AM-12:30 PM, Grand Large, DM-04. DM - Interactive - Machine Learning , Technical Paper - Interactive, 15th International Conference on Space Operations , Chair: Gérard Galet, gerard.galet@cnes.fr, CNES; Co-Chair: Alessandro Donati, alessandro.donati@esa.int, European Space Agency (ESA) - ESOC | |
| 10:30-11:00 AM | Analysis of automated techniques for routine monitoring and contingency detection of in-flight LEO operations at EUMETSAT E. Trollope; S. Tarquini; T. Francisco; M. Pagan Griso; L. Ventimiglia; A. Argemandy; J. Miller; d. montero |
| 11:00-11:30 AM | Statistical Methods for Outlier Detection in Space Telemetries C. Barreyre; B. Laurent; J. Loubes; B. Cabon; L. Boussouf |
| 11:30-12:00 PM | Numerical Analysis of Automated Anomaly Detection Algorithms for Satellite Telemetry L. Schlag; C. OMeara; M. Wickler |
| 12:00-12:30 PM | Open Discussion |
| 10:30 AM-12:30 PM, Saint-Jean, GNC-01. GNC - Flight Dynamics and Navigation I , Technical Paper, 15th International Conference on Space Operations , Co-Chair: Cheryl Gramling, cheryl.j.gramling@nasa.gov, NASA Goddard Space Flight; Chair: Pierre Pelipenko, pierre.pelipenko@cnes.fr, CNES | |
| 10:30-11:00 AM | Close rendezvous for ISS IDA with a PMD camera K. Klionovska; M. Vereda; T. Mueller; O. Peinado; F. Huber |
| 11:00-11:30 AM | Flight Dynamics Operational Experience From Exomars TGO Aerobraking Campaign At Mars F. Castellini; G. Bellei; B. Godard |
| 11:30-12:00 PM | SEXTANT X-ray Pulsar Navigation Demonstration: Recent On-Orbit Results L.B. Winternitz; M.A. Hassouneh; J.W. Mitchell; S.R. Price; W.H. Yu; S.R. Semper; P.S. Ray; K.S. Wood; Z. Arzoumanian; K.C. Gendreau |
| 10:30 AM-12:30 PM, Lacydon, GSE-06. GSE - Ground Segment Engineering , Technical Paper, 15th International Conference on Space Operations , Chair: Navid Dehghani, Navid.Dehghani@jpl.nasa.gov, Jet Propulsion Laboratory; Co-Chair: Aage-Raymond Riise, age-raymond.riise@esa.int, European Space Agency | |

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| 10:30-11:00 AM | 3D Web Visualization Tool to support HAYABUSA2-MASCOT Landing Site Selection Process A.F. Charpentier; V. Lafaille; A. Moussi; J. Malapert; L. Lorda; e. canalias; t. martin; r. garmier; T. Ho; C. Krause; j. biele; T. Okada |
| 11:00-11:30 AM | Assessing the Potential of Virtual Reality for Improving ESA's Space Operations R. Gad; M. Valadas; H. Graf; M. Olbrich; J. Keil; M. Sarkarati; S. Bamfaste; F. Nicolini; A. Cowley |
| 11:30-12:00 PM | ProToS: Automation of Flight Control Procedures for the European Data Relay System T. Beck; J. Hamacher |
| 12:00-12:30 PM | A Grammar-based Timeline for Increasing Fleet Situational Awareness N. Faerber; A. Scholz; K. Ojala; A. Demirsan; B. Teixeira De Sousa; J. Silva; R. Boumghar |
| 10:30 AM-12:30 PM, Joliette, HSO-04. HSO - Training and Simulations , Technical Paper, 15th International Conference on Space Operations , Chair: Austin Gosling, Austin.Gosling@insyen.com; Co-Chair: Michael Squire, Michael.D.Squire@nasa.gov, NASA Langley Research Center | |
| 10:30-11:00 AM | Assessing Human Performance and Fatigue in a Control Room during ISS Operations A. Fernandes; B. Danielsen; J. Langstrand; H. Nguyen |
| 11:00-11:30 AM | Lessons learned from autonomous crews' schedules in three long-duration Mars simulation missions C. Heinicke; J. Dunn; L. Poulet; A. Meier |
| 11:30-12:00 PM | Addressing Human Error in International Space Station Flight Control Teams: Advances in Ground Training for Science Operators S. Harris |
| 12:00-12:30 PM | Fusion Versus Fission – What Makes Groups Work? A. Hofmann |
| 10:30 AM-12:30 PM, Estaque, OC-04. OC - Mission Operations Concepts , Technical Paper, 15th International Conference on Space Operations , Chair: Maria Wörle, maria.woerle@dlr.de, DLR - Deutsches Zentrum f. Luft- u. Raumfahrt e.V.; Co-Chair: David Milligan, david.milligan@esa.int, European Space Agency (ESA) -ESCOC | |
| 10:30-11:00 AM | Evolution of M&C concept and mission operations with EGS-CC D. Lucia; M. Pecchioli |
| 11:00-11:30 AM | New operability concepts within ISIS mission operations ground segment T. François; C. Samitier |
| 11:30-12:00 PM | Revolution Or Evolution? The onward march to the next satellite operations paradigm shift L. Ventimiglia; d. montero; e. trollope; t. Francisco |
| 12:00-12:30 PM | Marrying Social Media Approaches and Space Flight Control -Eight Years at SpaceOps D.W. Scott; H. Cowart; A.J. Nichols; R.L. Roy; C.M. Albers |

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| 10:30 AM-12:30 PM, Notre Dame, PS-03. PS - Interactive - Planning for Deepspace Missions , Technical Paper - Interactive, 15th International Conference on Space Operations , Chair: Vladimir Nazarov, Vladimir.Nazarov@cosmos.ru, IKI RAN; Co-Chair: Martin Wickler, martin.wickler@dlr.de, DLR | |
| 10:30-11:00 AM | 2021: Communications amongst the armada of orbiters, landers, and rovers at Mars D. Wenkert; A. Williams; R.E. Gladden; M. Denis; C.D. Edwards; S.W. Asmar; C. Lee; M. Jesick; P. Schmitz; O. Reboud; S. Wood; T. Loureiro |
| 11:00-11:30 AM | MAPPS 3D tool: use for Rosetta science operations and plans for the upcoming ESA planetary missions M. Pérez-Ayúcar; F. Nespoli; P. Van Der Plas |
| 11:30-12:00 PM | Machine Learning in Operations for the Mars Express Orbiter R. Boumghar; L. Lucas; A. Donati |
| 12:00-12:30 PM | Open Discussion |
| 1:30 PM-3:30 PM, Mucem, CAN-07. CAN - Ground Network and Antenna Concepts , Technical Paper, 15th International Conference on Space Operations , Chair: Takahiro Yamada, tyamada@isas.jaxa.jp, JAXA/ISAS; Co-Chair: William Knopf, wknopf@hq.nasa.gov | |
| 1:30-2:00 PM | Toward a NASA Deep Space Optical Communications System L.J. Deutsch; S.M. Lichten; A.J. Russo; D.M. Cornwell; D.J. Hoppe |
| 2:00-2:30 PM | A TRI-BAND AUTOTRACK CONCENTRIC FEED S-X-KA FOR GROUND STATIONS RELATED TO EARTH OBSERVATION A. ROBERT; G. KIPFER; P. COUSIN; A. KARAS |
| 2:30-3:00 PM | NASA Near Earth Network 26 Ghz Polar Subnet in 2020+ P. Baldwin; V. Anderson; R. Chang; A. Svitak; T. Williams; S. El-Nimri; D. Kaul; M. Perrine; K. Abhyankar |
| 3:00-3:30 PM | Dual Antenna Tracking Concept in LEO and MEO Satcom M. Voin; G. Naym |
| 1:30 PM-3:30 PM, Grand Large, DM-05. DM - Machine Learning , Technical Paper, 15th International Conference on Space Operations , Co-Chair: Joan Differding, joan.differding@nasa.gov, NASA Ames Research Center; Chair: Armin Hauke, armin.hauke@dlr.de | |
| 1:30-2:00 PM | Satellite Telemetry Prediction Using Deep Learning Neural Networks C. OMeara; L. Schlag; M. Wickler |
| 2:00-2:30 PM | Performance assessment of NOSTRADAMUS & other machine learning-based telemetry monitoring systems on a spacecraft anomalies database S. Fuertes; B. Pilastre; S. D'Esquivan |
| 2:30-3:00 PM | Novelty Detection with Deep Learning J. Martinez; A. Donati |

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| 3:00-3:30 PM | The Added Value Of Advanced Feature Engineering And Selection For Machine Learning Models In Spacecraft Behavior Prediction G.M. Gowda; P.K. Jayanna; Y. Gu; R. Boumghar; L. Lucas; A. Bernardi; A. Dengel |
| 1:30 PM-3:30 PM, Joliette, FE-01. FE - Spacecraft Emergency and Contingency Operations , Technical Paper, 15th International Conference on Space Operations , Chair: Sabrina Eberle, sabrina.eberle@dlr.de, DLR/GSOC; Co-Chair: Thomas Ormston, thomas.ormston@esa.int, European Space Agency | |
| 1:30-2:00 PM | CloudSat - Life in Daylight Only Operations (DO-Op) M.M. Witkowski; D. Vane; T. Livermore |
| 2:00-2:30 PM | Reaction Wheel Performance Characterization Using the Kepler Spacecraft as a Case Study J. Kampmeier; R. Larsen; L.F. Migliorini; K.A. Larson |
| 2:30-3:00 PM | Attitude and Orbit Control of the Grace Satellites at extremely low power S. Löw; J. Herman; K. Mueller; E.S. Davis |
| 3:00-3:30 PM | The Fall and Rise of STEREO Behind M.W. Cox; D.A. Ossing |
| 1:30 PM-3:30 PM, Saint-Jean, GNC-02. GNC - Flight Dynamics and Navigation II , Technical Paper, 15th International Conference on Space Operations , Co-Chair: Pierre Pelipenko, pierre.pelipenko@cnes.fr, CNES; Chair: Cheryl Gramling, cheryl.j.gramling@nasa.gov, NASA Goddard Space Flight | |
| 1:30-2:00 PM | Machine Learning Approach to Initial Orbit Determination of Unknown LEO Satellites B. Lee; W. Kim; J. LEE; Y. Hwang |
| 2:00-2:30 PM | Initial operations of HAG1-SmallGEO mission F. Jiménez; J. Cuesta; R. Sánchez; J. Robles; A. Abad; M. Sansegundo; M. Sánchez; A. Murillo |
| 2:30-3:00 PM | GPS Operations in High Earth Orbit: Recent Experiences and Future Opportunities F.H. Bauer; J. Parker; J. Donaldson; B. Ashman |
| 3:00-3:30 PM | The Key Role and Advantages of GNSS Precise Relative Positioning in Spacecraft Formation Flying Missions Design, Analysis and Operations M. Ambrosini |
| 1:30 PM-3:30 PM, Lacydon, GSE-07. GSE - New Challenges for Software Development and Maintenance , Technical Paper, 15th International Conference on Space Operations , Chair: Helene Pasquier, helene.pasquier@cnes.fr, CNES; Co-Chair: Mauro Pecchioli, mauro.pecchioli@esa.int, European Space Agency (ESA) -ESOC | |
| 1:30-2:00 PM | Software development using Agile and DevOps approach : Lessons learned and technics in space projects c. surace; P. Chabaud; M. Leurent |
| 2:00-2:30 PM | Using DevOps for Providing Ground Segment Software as a Service M. Hawkshaw |

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| 2:30-3:00 PM | CNES-ISIS, Design of future ground system operations over a fully automatized stack of CCSDS-MO Services J. GEORGER |
| 3:00-3:30 PM | Leveraging MBSE for ESA Ground Segment Engineering: Starting with the Euclid Mission D. Fischer; F. Keck; M. Spada |
| 1:30 PM-3:30 PM, Estaque, OC-05. OC - Operations Automation and Optimization II , Technical Paper, 15th International Conference on Space Operations , Chair: David Milligan, david.milligan@esa.int, European Space Agency (ESA) -ESCOC; Co-Chair: Carol Polanskey, carol.polanskey@jpl.nasa.gov, Jet Propulsion Lab | |
| 1:30-2:00 PM | Evolution of the Eclipse Operations Concept for ESA's X-ray Observatory XMM-Newton S. Malik; U. Weissmann; T. Godard; M.G. Kirsch; D. Weibert; A. Mcdonald |
| 2:00-2:30 PM | The Goal-oriented Robust Operations and Their Demonstration on Orbit T. Obata; S. Nakasuka; S. Shirasaka |
| 2:30-3:00 PM | Incorporating AEGIS autonomous science into Mars Science Laboratory rover mission operations R. Francis; T. Estlin; S. Johnstone; L. Peret; V. Mousset; G. Doran; D. Gaines; S. Montaña; O. Gasnault; J. Frydenvang; R. Wiens; S. Schaffer; B. Pavri; V. Verma; D. Chattopadhyay; B. Bornstein; N. Mittal; L. DeFlores |
| 3:00-3:30 PM | Stationkeeping Strategies to Maximize Science Availability for the GOES-R Series Satellites C. Wheeler; T. Walsh; A. Krimchansky |
| 1:30 PM-3:30 PM, Notre Dame, PS-04. PS - Deepspace Missions , Technical Paper, 15th International Conference on Space Operations , Chair: Suzanne Dodd, srdodd@jpl.nasa.gov, Jet Propulsion Laboratory; Co-Chair: Martin Wickler, martin.wickler@dlr.de, DLR | |
| 1:30-2:00 PM | Spacecraft Block Scheduling for NASA's Deep Space Network T.M. Hackett; M. Johnston; S.G. Bilen |
| 2:00-2:30 PM | Complexity-Based Link Assignment for NASA's Deep Space Network for Follow-the-Sun Operations M. Johnston; D. Tran; J. Lad; D. Brown; K. Roffo; C. Lee |
| 2:30-3:00 PM | InSight Cruise and Surface Operations: Integrated Planning, Sequencing and Modeling using APGen F.L. Ridenhour; C.R. Lawler; M. Schaffer; M. Smith; S.S. Wissler; P. Maldague |
| 3:00-3:30 PM | Science Planning Implementation and Challenges for the ExoMars Trace Gas Orbiter M. Ashman; A. Cardesin Moinelo; D. Frew; J. Garcia Beteta; B. Geiger; L. Metcalfe; M. Muñoz; F. Nespoli |
| 4:00 PM-6:00 PM, Mucem, CAN-08. CAN - Network Implementation/Operations , Technical Paper, 15th International Conference on Space Operations , Chair: Klaus-Juergen Schulz, klaus-juergen.schulz@esa.int, European Space Agency (ESA) -ESOC; Co-Chair: Osvaldo Peinado, osvaldo.peinado@dlr.de, DLR | |
| 4:00-4:30 PM | Automation of the CNES Multimission Network operations. System architecture, operations concept and organization J. Roquebert |

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| 4:30-5:00 PM | Automated Spacecraft Communications Service Demonstration Using NASA's SCA_N Testbed D.J. Mortensen; C. Roberts; R. Reinhart; D. Chelmins |
| 5:00-5:30 PM | ESA Link Budget Tool Evolution G. Lorenzo; M. Montagna; H. Ernst; j. villalvilla; A. Kiilerich; L. Santos |
| 5:30-6:00 PM | emirates mars mission overview and current status A. Alrais; B.A. Stroozas; M. Bester; M. Alloghani; M. Alblooshi; R. Aldallal |
| 4:00 PM-6:00 PM, Joliette, FE-02. FE - Fault Management and Recovery , Technical Paper, 15th International Conference on Space Operations , Chair: Keyur Patel, keyur@jpl.nasa.gov, Jet Propulsion Laboratory; Co-Chair: Thibault Dosogne, thibault.dosogne@cnes.fr | |
| 4:00-4:30 PM | GPM Mission's Best Practices: PERP Design D. Patel; J. Greenwell; P.C. Frazier; R. Myers |
| 4:30-5:00 PM | What If...The Evolution Of Contingency Planning On An Extended Mission P. Viens; E. Martin; S. Blanchard |
| 5:00-5:30 PM | Lessons Learned During the Transition of SORCE Science Operations to Daylight Only Operations S. Ryan; E. Pilinski; D. McCabe |
| 5:30-6:00 PM | Kepler/K2 Spacecraft Emergency Mode Recovery S. Ross; K.A. Larson; K. McCalmont-Everton; C.A. Peterson; J. Troeltzsch |
| 4:00 PM-6:00 PM, Saint-Jean, GNC-03. GNC - Attitude Determination and Control , Technical Paper, 15th International Conference on Space Operations , Chair: Werner Enderle, werner.enderle@esa.int; Co-Chair: William Taber, William.L.Taber@jpl.nasa.gov, Jet Propulsion Laboratory | |
| 4:00-4:30 PM | Increased Operational Availability and Simplified Operations Using Dither Gyro Scale Factor Calibration A. Reth; D. Carter; D.C. Freesland; A. Krimchansky |
| 4:30-5:00 PM | Flying with an Umbrella: Operational Strategies for the Tandem-L Mission M. Dauth; D. Schulze; R. Kahle; M. Bachmann; E. Maurer |
| 5:00-5:30 PM | AOCS Operations for Grace Follow-On C. Reinhardt; J. Herman; F. Cossavella |
| 5:30-6:00 PM | Advanced Attitude Estimation Algorithm for Arase Spacecraft: Performance Evaluation with Real Data H.E. Soken; S. Sakai; K. Asamura; Y. Nakamura; T. Takashima |
| 4:00 PM-6:00 PM, Lacydon, GSE-08. GSE - Service Oriented Architectures , Technical Paper, 15th International Conference on Space Operations , Chair: Robert Beswick, Robert.M.Beswick@jpl.nasa.gov, JPL/NASA; Co-Chair: Hélène Ruiz, helene.ruiz@cnes.fr, CNES | |
| 4:00-4:30 PM | SSA Data Systems evolution towards hybrid Architecture G. Di Girolamo |

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| 4:30-5:00 PM | RESTful CFDP: Managing GDS Complexity with Microservices J. Choi |
| 5:00-5:30 PM | Micro-Services in Ground Control Center: Lessons Learned C. Ciocirlan; N. Champsavoire; M. Duhaze |
| 5:30-6:00 PM | Rethinking Ground Systems: Supporting New Mission Types through Modularity and Standardization S. Gärtner; M. Geyer; S. Hackel; U. Häring; A. Hauke; C. OMeara; Y. Wasser |
| 4:00 PM-6:00 PM, Grand Large, MDM-05. MDM - Mission Design for Robotic Missions , Technical Paper, 15th International Conference on Space Operations , Co-Chair: Michelangelo Ambrosini, michelangelo.ambrosini@gmail.com, EUMETSAT; Co-Chair: Marco Buemi, marco.buemi@eumetsat.int, EUMETSAT | |
| 4:00-4:30 PM | The (Missing) Cassini Scan Platform: A Win or a Loss for Orbital Science? J. Pitesky; J. Webster |
| 4:30-5:00 PM | LUMIO: achieving autonomous operations for Lunar exploration with a CubeSat S. Speretta; F. Topputo; J. Biggs; P. Di Lizia; M. Massari; K. Mani; D. Dei Tos; S. Ceccherini; V. Franzese; A. Cervone; P. Sundaramoorthy; R. Noomen; S. Mestry; A. Cipriano; A. Ivanov; D. Labate; L. Tommasi; A. Jochemsen; J. Gailis; R. Furfaro; V. Reddy; J. Vennekens; R. Walker |
| 5:00-5:30 PM | Venera-D Project: Scenario and trajectory design problems N. Eysmont; L. Zasova; R. Nazirov; A. Simonov |
| 5:30-6:00 PM | Telecom Spacecraft mission design : Electric Orbit Raising for Airbus communications satellites J. AUTRIC; P. Escourrou; I. Laine |
| 4:00 PM-6:00 PM, Estaque, OC-06. OC - Flight Operations Concepts II , Technical Paper, 15th International Conference on Space Operations , Chair: Nic Mardle, nic.mardle@esa.int, European Space Agency (ESA); Co-Chair: Brian Giovannoni, brian.j.giovannoni@jpl.nasa.gov, Jet Propulsion Laboratory | |
| 4:00-4:30 PM | Ground Stations Network Operations for GALILEO LEOP with 4 Satellites F. Faure-Marfany; F. Nayrac |
| 4:30-5:00 PM | Mars Express Data Relay Support to ExoMars Schiaparelli Lander S. Wood; J. Godfrey; A. Johnstone; S. Sangiorgi |
| 5:00-5:30 PM | Designing a Robust and Efficient Spacecraft Operations Concept: From Spacecraft Operations to Spacecraft Configuration Management R. Dyer; R. Porta; A. Loretucci; E. Valido; F. Ares; F. Perlik |
| 5:30-6:00 PM | RADARSAT CONSTELLATION MISSION: Toward launch and operations m. doyon; J. Smyth; G. Kroupnik; C. Carrie; M. Sauvageau; J. Levesque; F. Babiker; V. Abbasi; C. Giguere; S. Côté; J. Bergeron |

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| 4:00 PM-6:00 PM, Notre Dame, PS-05. PS - Concepts , Technical Paper, 15th International Conference on Space Operations , Chair: Falk Mrowka, Falk.Mrowka@dlr.de, German Aerospace Center; Co-Chair: Thomas Ormston, thomas.ormston@esa.int, European Space Agency | |
| 4:00-4:30 PM | Design of a General Mission Timeline Tool While Supporting an Operational Observatory R. Timmons; B. de Pontieu; N. Hurlburt; P. Shirts |
| 4:30-5:00 PM | Optimization of the battery usage during eclipses using a machine learning approach G. De Canio; R. Boumghar; T. Godard; U. Weissmann |
| 5:00-5:30 PM | Long Term Planning for the ExoMars Trace Gas Orbiter Mission: Opportunity Analysis and Observation Scheduling B. Geiger; A. Cardesin Moinelo; D. Frew; M. Ashman; J. Garcia Beteta; M. Muñoz; M. Costa ; L. Metcalfe; H. Svedhem |
| 5:30-6:00 PM | An Efficient Planning Process for Galileo Service Operations V. Carandente; G. Doeglas; R. Cadenas Gorgojo; R. Ballweg |

Thursday, May 31, 2018

| Time | Session or Event Info |
|---|--|
| 10:30 AM-12:30 PM, Mucem, CAN-09. CAN - Communications Architectures and Spectrum Allocations , Technical Paper, 15th International Conference on Space Operations , Chair: William Knopf, wknopf@hq.nasa.gov; Co-Chair: Marco Lanucara, marco.lanucara@esa.int | |
| 10:30-11:00 AM | Multiple Uplinks Per Antenna (MUPA) Signal Acquisition Schemes D. Morabito; D.S. Abraham |
| 11:00-11:30 AM | Simultaneous 2-Way Doppler and Ranging for Multiple Spacecraft at Mars K. Cheung; D. Divsalar; S. Bryant; C. Lee |
| 11:30-12:00 PM | Lunar Relay Coverage Analysis for RF and Optical Links K. Cheung; C. Lee |
| 12:00-12:30 PM | The ESA POCKET+ housekeeping telemetry compression algorithm: Why make spacecraft operations harder than it already is? D.J. Evans; A. Donati |
| 10:30 AM-12:30 PM, Grand Large, DM-06. DM - Data Handling , Technical Paper, 15th International Conference on Space Operations , Chair: Kevin Marston, kevin.marston@eumetsat.int; Co-Chair: Robert Carvalho, robert.e.carvalho@nasa.gov, NASA Ames Research Center | |
| 10:30-11:00 AM | MULTI-MISSION TELEMETRY ARCHIVE AND ACCESS SYSTEM (MTAAS) A.J. Mirabel |

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| 11:00-11:30 AM | Data management design, operations and maintenance at DPCT A. Mulone; R. Messineo |
| 11:30-12:00 PM | WebTCAD: A Tool for Ad-hoc Visualization and Analysis of Telemetry Data for Multiple Missions C. Pankratz; F. Sanchez; D.M. Lindholm; R. Christofferson; D. Osborne; T. Baltzer |
| 12:00-12:30 PM | Principles for Good Science Digital Archives J. Hughes; D.J. Crichton |
| 10:30 AM-12:30 PM, Joliette, FE-03. FE - Operations Management , Technical Paper, 15th International Conference on Space Operations , Chair: Gilles Picart, gilles.picart@cnes.fr, CNES; Co-Chair: Carol Polanskey, carol.polanskey@jpl.nasa.gov, Jet Propulsion Lab | |
| 10:30-11:00 AM | Machine Learning Modeling Methods for Radiation Belts Profile Predictions T.J. Finn; R. Boumghar; J. Martinez; A. Georgiadou |
| 11:00-11:30 AM | SORCE Daylight Only Operations E. Pilinski; S. Ryan; D. McCabe |
| 11:30-12:00 PM | Manoeuvre Concept for EarthCARE – A Novel Approach to Thruster Operations T. Ormston; D. Fornarelli; N. Mardle; D. Sieg; G. Ziegler |
| 12:00-12:30 PM | MICROSCOPE .. A challenging commissioning phase F. Ducheve; B. OLIVE; R. LAPEYRE; E. Aitier; P. IGON; V. VOISIN; G. CLEMENT; S. DEVAULX |
| 10:30 AM-12:30 PM, Saint-Jean, GNC-04. GNC - GNC and Astrodynamics Software , Technical Paper, 15th International Conference on Space Operations , Co-Chair: Fabio D'Amico, fabio.damico@asi.it, Italian Space Agency - ASI; Chair: William Taber, William.L.Taber@jpl.nasa.gov, Jet Propulsion Laboratory | |
| 10:30-11:00 AM | Multi-satellites Precise Orbit Determination, an adaptable open-source implementation L. Maisonobe; P. Parraud; M. Journot |
| 11:00-11:30 AM | Evaluation Results of GPS-based Precise Orbit Determination for Earth Observation Satellite in Near Real-time Operation K. Akiyama; H. Masuda; S. Kasho; T. Sakamoto; S. Nakamura |
| 11:30-12:00 PM | Asteroids Dynamic Estimation in a Solely Vision-Based Navigation System N. Monge; I. Gortazar; E. Zenou |
| 12:00-12:30 PM | G-SPHERE-S: First GPS/Galileo in-orbit GNSS receiver for orbit determination of MICROSCOPE satellite T. JUNIQUE; D. PASCAL; P. Guidotti; P. BATAILLE |
| 10:30 AM-12:30 PM, Lacydon, GSE-09. GSE - Interactive-Mission Operations Systems Infrastructures and Roadmaps I , Technical Paper - Interactive, 15th International Conference on Space Operations , Chair: Helene Pasquier, helene.pasquier@cnes.fr, CNES; Co-Chair: Yunus Bhayat, ybhayat@sansa.org.za, South African National Space Agency | |
| 10:30-11:00 AM | Infrastructure Driven Data Systems at ESOC: A Strategic View M. Pecchioli |

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| 11:00-11:30 AM | Towards a Modular And Flexible New Ground System A. Hauke; M. Geyer |
| 11:30-12:00 PM | CNES Mission Operations Systems roadmap : towards rationalisation and efficiency with ISIS P. G  lie; H. Pasquier; Y. Labrune |
| 12:00-12:30 PM | Open Discussion |
| 10:30 AM-12:30 PM, Notre Dame, OC-07. OC - Operations Engineering , Technical Paper, 15th International Conference on Space Operations , Chair: Herv   C  me, herve.come@esa.int, ESA - European Space Operations Centre; Co-Chair: dominique montero, dominique.montero@eumetsat.int, EUMETSAT | |
| 10:30-11:00 AM | Operability Engineering for Europa Clipper: Formulation Phase Results and Lessons D.L. Bindschadler; J. Signorelli; K.A. Schimmels |
| 11:00-11:30 AM | Operations Planning and Validation of Hall Effect Thrusters for Earth Orbiting Satellites A. K  ker; B. Yaglioglu; O. Gundogan; A. Utku; E. Imre |
| 11:30-12:00 PM | The Future of Space Mission Operations Using a Multi-nodal Architecture T.C. Sorensen; E. Pilger; M.A. Nunes |
| 12:00-12:30 PM | Spacecraft operation design for an energy-balanced mission of a lunar orbiter M. Jeon; S. Lim; S. Choi |
| 10:30 AM-12:30 PM, Estaque, SSO-01. SSO - Cubesat Networks/Swarms; Constellation Operations , Technical Paper, 15th International Conference on Space Operations , Chair: Harry Shaw, harry.c.shaw@nasa.gov, NASA-Goddard Space Flight Center; Co-Chair: Ignacio Clerigo, ignacio.clerigo@esa.int, ESA/ESOC | |
| 10:30-11:00 AM | Mission Planning for the TIM Nanosatellite Remote Sensing Constellation A. Kleinschrodt; T. Nogueira; N. Reed; S. Fratini; K. Schilling |
| 11:00-11:30 AM | Agile Mission Operations in the CubeSat Project MOVE-II A. Lill; T. Zwickl; M. Langer |
| 11:30-12:00 PM | CANYVAL-X: Operational Scenario and Strategy Y. Song; Y. Lee; J. Park; S. Park |
| 1:30 PM-3:30 PM, Grand Large, DM-07. DM - Data Analytics and Automation I , Technical Paper, 15th International Conference on Space Operations , Chair: Alice Bowman, Alice.Bowman@jhuapl.edu, Johns Hopkins University Applied Physics Laboratory; Co-Chair: Marco Buemi, marco.buemi@eumetsat.int, EUMETSAT | |
| 1:30-2:00 PM | <i>CHARTing the Future</i> – An offline data analysis and reporting toolkit to support automated decision-making in flight-operations J. Schulster; R. Evill; J. Rogissart; M. Burla; N. Feldmann; P. Raval; A. Argemandy; S. Phillips; R. Dyer; M. Elson |
| 2:00-2:30 PM | Automatic Generation of Telemetry Display B.B. Breyer; G. Picart; J. Troillard; C. Battut |

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| 2:30-3:00 PM | Discovering the needs of Automation N. Salor Moral; S. Dionisi |
| 1:30 PM-3:30 PM, Joliette, FE-04. FE - System Operations Management , Technical Paper, 15th International Conference on Space Operations , Chair: Nic Mardle, nic.mardle@esa.int, European Space Agency (ESA); Co-Chair: Brian Giovannoni, brian.j.giovannoni@jpl.nasa.gov, Jet Propulsion Laboratory | |
| 1:30-2:00 PM | CNES support to HAYABUSA2-MASCOT operations A. Moussi-Soffys; L. Lorda; D. Granena; C. Cénac-Morthé; C. Dudal; e. canalias; t. martin; A.F. Charpentier; r. garmier; C. Krause; T. Ho; C. Ziach; j. biele; Y. Tsuda; T. Okada |
| 2:00-2:30 PM | Ten Years of RADARSAT-2 Operations C. Lambert; M. Chabot; P. Rolland |
| 2:30-3:00 PM | Evolution of Operations Throughout DEIMOS-1 Mission S. Álvarez; I. Bueno; M. Carballo; M. Sánchez; P. Pisabarro Marrón; F. Pirondini |
| 3:00-3:30 PM | Towards a more reactive Earth observation Pleiades system! L. Dumery; G. Codou; T. Duverger; C. Vesco; O. Chassin |
| 1:30 PM-3:30 PM, Mucem, GNC-05. GNC - Interplanetary Missions , Technical Paper, 15th International Conference on Space Operations , Chair: Pierre Pelipenko, pierre.pelipenko@cnes.fr, CNES; Co-Chair: Werner Enderle, werner.enderle@esa.int | |
| 1:30-2:00 PM | MASCOT landing on Asteroid Ryugu : flight dynamics team contribution to the landing site selection process r. garmier; L. Lorda; e. canalias; t. martin; a. Moussi; j. biele |
| 2:00-2:30 PM | The Cassini Mission: Reconstructing Thirteen Years of the Most Complex Gravity-Assist Trajectory Flown to Date J. Bellerose; D. Roth; K. Criddle |
| 2:30-3:00 PM | Cassini In-Flight Navigation Adaptations D. Roth; Y. Hahn; B. Owen; S.V. Wagner |
| 3:00-3:30 PM | Rosetta Flight Dynamics Support to Philae Search Campaign and Relay Operations P. Muñoz; V. Companys |
| 1:30 PM-3:30 PM, Lacydon, GSE-10. GSE - Mission Operations Systems Infrastructures and Roadmaps II , Technical Paper, 15th International Conference on Space Operations , Chair: Gareth Williams, gareth.williams@eumetsat.int, EUMETSAT; Co-Chair: Paul Gélie, paul.gelie@cnes.fr, CNES | |
| 1:30-2:00 PM | Never change a running system? A renewal of the Columbus Monitoring and Control System N. Trebbin; M. Geyer; A. Schroeder-Lanz; C. Stangl |
| 2:00-2:30 PM | Challenges to evolve a S2K-based PROBA GS towards EGS-CC B. Denis; A. Verheyden; D. Baudoux |
| 2:30-3:00 PM | Evolution of Mission Control System development with EGS-CC D. Lucia; M. Pecchioli; S. Carosi; M. Clements |

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| 3:00-3:30 PM | Accommodated Check-out and Mission Control and Data System M. Hobsch; F. Cossavella; G. Morfill |
| 1:30 PM-3:30 PM, Notre Dame, OC-08. OC - Payload Operations Concepts , Technical Paper, 15th International Conference on Space Operations , Chair: David Welch, welch@lasp.colorado.edu, University of Colorado Boulder; Co-Chair: Ignacio Clerigo, ignacio.clerigo@esa.int, ESA/ESOC | |
| 1:30-2:00 PM | Flexible Payload Operations of Satellite Communication Systems E. Godino; L. Escolar; A. Honold |
| 2:00-2:30 PM | Sentinels Optical Communications Payload (OCP) Operations: From Test to In-Flight Experience I. Shurmer; F. Marchese; J. Morales-Santiago; P. Emanuelli |
| 2:30-3:00 PM | SVOM payload mission operation concept M. Charneau |
| 3:00-3:30 PM | BepiColombo Venus Flyby Science Operations Feasibility Analysis S. De La Fuente; E. Montagnon; V. Mangano; P. Rodriguez; R. Andres; M. Casale; J. Benkhoff; J. Zender |
| 1:30 PM-3:30 PM, Saint-Jean, PS-06. PS - Earth Observation I , Technical Paper, 15th International Conference on Space Operations , Co-Chair: Maria Wörle, maria.woerle@dlr.de, DLR - Deutsches Zentrum f. Luft- u. Raumfahrt e.V.; Chair: David LaVallee, david.lavallee@jhuapl.edu, The Johns Hopkins University Applied Physics Laboratory | |
| 1:30-2:00 PM | Online Coordination scheduling for Earth observation satellite constellation under communication constraints G. Li; L. Xing; R. He; F. Yao; Y. Chen |
| 2:00-2:30 PM | Mission planning for non-homogeneous Earth observation satellites constellation for disaster response W. Vongsantivanich; N. Holvoet; S. CHAIMATANAN; D. DELAHAYE |
| 2:30-3:00 PM | The Mission of Global Monitoring of the Multitude of Orbital Objects by Ground and Space Based Means, and its Supporting Complex of Planning Methods T.V. Labutkina; V.V. Belikov |
| 3:00-3:30 PM | Application of Deep Reinforcement Learning in Space Telescope Scheduling Problem D. Li; Y. Gu; B. Meng |
| 1:30 PM-3:30 PM, Estaque, SSO-02. SSO - Challenges with Small Satellite Operations , Technical Paper, 15th International Conference on Space Operations , Chair: Eugene Avenant, eavenant@sansa.org.za, The South African National Space Agency; Co-Chair: Scott Schaire, scott.h.schaire@nasa.gov | |
| 1:30-2:00 PM | S2TEP - A lightweight mission operations concept F. Cossavella; G. Morfill; M. Hobsch |
| 2:00-2:30 PM | Deep Space Cubesat Communications P. Hyvönen; M. Liljeblad; A. Vidmark |

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| 2:30-3:00 PM | The autonomous declination of AURIGA: a new yardstick towards commoditization of Small Satellite missions L. Oddos-Marcel; P. Martinez; M. Fullenbaum |
| 3:00-3:30 PM | Lunar Flashlight CubeSat GNC System Development for Lunar Exploration K.d. Lo; W. Jones-Wilson; P.C. Lai |
| 4:00 PM-6:00 PM, Notre Dame, CSO-1. CSO - Commercial Transportation Services , Technical Paper, 15th International Conference on Space Operations , Co-Chair: Mark Danehy, mark.danehy@noaa.gov; Co-Chair: Zeina Mounzer, zeina.mounzer@telespazio-vega.de, Telespazio VEGA Deutschland GmbH | |
| 4:00-4:30 PM | The Evolution of Payload Data Capabilities on the Commercial Visiting Vehicles that Service the International Space Station L.M. Wiggins; I. Ristovski |
| 4:30-5:00 PM | ICE Cubes: A Fast-Track, Low-Cost Service for Small Experiments to the ISS C. Jacobs; M. Ricci; M. Schmitt; H. Stenuit; K. Struyven |
| 5:00-5:30 PM | Identification of User Needs and Possible Platforms for Future Microgravity and Space Experimentation C. Boggs; V. Dhiri |
| 5:30-6:00 PM | Selection of Private Spaceports for Space Tourism and Space Travel: Selection Criteria of Various Global Locations U. GUVEN; s. pathak |
| 4:00 PM-6:00 PM, Grand Large, DM-08. DM - Data Analytics and Automation II , Technical Paper, 15th International Conference on Space Operations , Chair: Alice Bowman, Alice.Bowman@jhuapl.edu, Johns Hopkins University Applied Physics Laboratory; Co-Chair: Marco Buemi, marco.buemi@eumetsat.int, EUMETSAT | |
| 4:00-4:30 PM | The MUSE approach to extract information from telemetry J. da Silva; A. Donati; A. Altenkirch |
| 4:30-5:00 PM | Implicit S/C Bus Characteristics in House Keeping Data and Auxiliary Sensors J. Pitann; A.K. Spörl; M. Markgraf; T. Fruth |
| 5:00-5:30 PM | OPALE : Reducing complexity of EGS-CC Automation Procedures S. Dionisi; N. Salor Moral; F. Trifin |
| 5:30-6:00 PM | Enhanced Awareness In Space Operations Using Multipurpose Dynamic Network Analysis R. Boumghar; J. da Silva; I. Angelis; J. Schulster; A. Donati |
| 4:00 PM-6:00 PM, Joliette, FE-05. FE - End-of-Life Operations , Technical Paper, 15th International Conference on Space Operations , Chair: Richard Dyer, richard.dyer@eumetsat.int, EUMETSAT; Co-Chair: Beatrice Deguine, beatrice.deguine@cnes.fr, CNES | |
| 4:00-4:30 PM | Final manoeuvre from highly elliptical orbit I. Kovalenko; N. Eysmont |
| 4:30-5:00 PM | Planning an End-Of-Life Technology Test Campaign for the Metop-A satellite S. Tarquini |

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| 5:00-5:30 PM | Spot 5 End Of Life T. Dosogne; G. Beaumet; F. Delmas |
| 5:30-6:00 PM | Flight Dynamics operations design to vacate a reference orbit T. Nicolas |
| 4:00 PM-6:00 PM, Mucem, GNC-06. GNC - Space Debris and Collision Avoidance I , Technical Paper, 15th International Conference on Space Operations , Chair: Shinichi Nakamura, nakamura.shinichi@jaxa.jp, Japan Aerospace Exploration Agency; Co-Chair: Matthew Duncan, matt@space-nav.com | |
| 4:00-4:30 PM | Mitigate collision risk: different approaches for different missions S. AITZAID; C. Ferrier; Y. DUCASSOU; C. HOURTOLLE; Y. PREVOT |
| 4:30-5:00 PM | Automated Spacecraft Conjunction Assessment at Mars and the Moon - A Five Year Update D. Berry; Z. Tarzi; R.B. Roncoli; R.S. Wilson |
| 5:00-5:30 PM | Unmaneuverable to Maneuverable – Developing Collision Avoidance Operations for a 17 year old Satellite L.F. Migliorini; E. Graser; D. Osborne; C. Barnes |
| 5:30-6:00 PM | Collision Risk Mitigation for Deimos Imaging Low Thrust Satellites A. Mazzoleni; M. Luengo; J. Santos Wybenga; I. Bueno Serrano; P. Pisabarro Marrón; F. Pirondini |
| 4:00 PM-6:00 PM, Lacydon, GSE-11. GSE - Mission Operations Systems Infrastructures and Roadmaps III , Technical Paper, 15th International Conference on Space Operations , Chair: Yunus Bhayat, ybhayat@sansa.org.za, South African National Space Agency; Co-Chair: Robert Beswick, Robert.M.Beswick@jpl.nasa.gov, JPL/NASA | |
| 4:00-4:30 PM | The Importance of Flight Operations Involvement During the Early Phases of the Systems Development Lifecycle for Enterprise Multi-mission Ground System Upgrades J. Vollmer; M. Atkinson |
| 4:30-5:00 PM | Yet Another Mission Control System for Affordable Missions M. Schmitt; F. Diet; N. Mihalache |
| 5:00-5:30 PM | Ground Segment Services: an effective approach for Operations and future programmes M. Horny |
| 5:30-6:00 PM | An EGS-CC-based Core Control Segment M. Niezette; D. Lucia |
| 4:00 PM-6:00 PM, Saint-Jean, PS-07. PS - Earth Observation II, Ground Station I , Technical Paper, 15th International Conference on Space Operations , Co-Chair: Suzanne Dodd, srdodd@jpl.nasa.gov, Jet Propulsion Laboratory; Chair: David LaVallee, david.lavallee@jhuapl.edu, The Johns Hopkins University Applied Physics Laboratory | |
| 4:00-4:30 PM | Earth Observation Satellites: An Innovative Mission Planning for Efficient Use of Modern Weather Forecast F. DARNON; S. ARTIGUES; I. SEBBAG; M. SOREL; T. DUGUIN |

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| 4:30-5:00 PM | The EnMAP Mission Planning System T. Fruth; C. Lenzen; E. Gross; F. Mrowka |
| 5:00-5:30 PM | Planning of LCT Operations for AlphaSat's Technology Demonstration Payload TDP-1 C. Lenzen; M.T. Wörle; G. Rossmanith; F. Mrowka |
| 5:30-6:00 PM | Operating and Evolving the EDRS Payload and Link Management System T. Göttfert; M.T. Wörle; C. Lenzen; S. Prüfer |
| 4:00 PM-6:00 PM, Estaque, SSO-03. SSO - Cubesat and Nanosat Operations , Technical Paper, 15th International Conference on Space Operations , Co-Chair: Eugene Avenant, eavenant@sansa.org.za, The South African National Space Agency; Chair: Scott Schaire, scott.h.schaire@nasa.gov | |
| 4:00-4:30 PM | Preparing for the Challenges of Operating a CubeSat in Deep Space M. Sorgenfrei |
| 4:30-5:00 PM | Next Level Autonomous Nanosatellite Operations H. Kayal; O. Balagurin; K. Djebko; G. Fellingner; F. Puppe; D. Seipel; S. Serdar; A. Schneider; T. Schwarz; H. Wojtkowiak |
| 5:00-5:30 PM | Practical Implementation of Test-As-You-Fly for the DESCENT CubeSat Mission V. Jain; U. Bindra; L. Murugathan; F.T. Newland; Z. Zhu |
| 5:30-6:00 PM | Innovative Launch Opportunity for Small Satellite by Using One and Only Function on Kibo/ISS H. Akagi; T. Sato; K. Matsumoto; D. Ozawa; S. Ogawa |

Friday, June 01, 2018

| Time | Session or Event Info |
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| 9:00 AM-10:00 AM, Notre Dame, CSO-2. CSO - Automation in Operations , Technical Paper, 15th International Conference on Space Operations , Co-Chair: Zeina Mounzer, zeina.mounzer@telespazio-vega.de, Telespazio VEGA Deutschland GmbH; Co-Chair: Mark Danehy, mark.danehy@noaa.gov | |
| 9:00-9:30 AM | SPELL-fuzz: An Innovative Tool for Fully Automated Verification of SPELL Satellite Operation Procedures R. Sasnauskas; G. Morelli; K.P. Liolis |
| 9:30-10:00 AM | Automated Operations of Large GEO Telecom Satellites with Digital Transparent Processors (DTP): Challenges and Lessons Learned G. Morelli; A. Mainguet; M. Eustace |
| 9:00 AM-10:00 AM, Grand Large, DM-09. DM - Advanced Technologies for Space Operations I , Technical Paper, 15th International Conference on Space Operations , Chair: Jay Trimble, jay.p.trimble@nasa.gov, NASA-Ames; Co-Chair: David Welch, welch@lasp.colorado.edu, University of Colorado Boulder | |

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| 9:00-9:30 AM | Web-based Generation of BepiColombo Operational Procedures and Payload Operations Request S. De La Fuente; A. Carasa; I. Ortiz de Landaluce; E. Montagnon; M. Casale |
| 9:30-10:00 AM | Dependency Finder: Surprising Relationships in Telemetry J. Martinez; L. Lucas; A. Donati |
| 9:00 AM-10:00 AM, Joliette, FE-06. FE - Extended Mission: Lessons Learned , Technical Paper, 15th International Conference on Space Operations , Chair: Patricia Lock, Patricia.d.Lock@jpl.nasa.gov, Jet Propulsion Laboratory; Co-Chair: Gilles Picart, gilles.picart@cnes.fr, CNES | |
| 9:00-9:30 AM | New Ways to Fly an Old Spacecraft: Enabling Further Discoveries with Kepler's K2 Mission K.A. Larson; K. McCalmont-Everton; C.A. Peterson; S. Ross; J. Troeltzsch; D. Wiemer |
| 9:30-10:00 AM | Mars Express: Powering through eclipses - Thermal Strategies to Prolong Battery Life T. Dressler; L. Lucas; J. Godfrey |
| 9:00 AM-10:00 AM, Mucem, GNC-07. GNC - Space Debris and Collision Avoidance II, Flight Dynamics and Navigation III , Technical Paper, 15th International Conference on Space Operations , Co-Chair: Fabio D'Amico, fabio.damico@asi.it, Italian Space Agency - ASI; Chair: Christian Reinhardt, christian.reinhardt@dlr.de, German Space Operations Center (DLR-GSOC) | |
| 9:00-9:30 AM | Realistic Covariance Generation for the GPM Spacecraft J. Pawloski; M. Duncan; S. Hesar; T. Lechtenberg; J. Wysack |
| 9:30-10:00 AM | Operational Collision Risk Management for NOAA's Low Earth Orbit Satellite Fleet M. Duncan; S. Nair; M. Danehy |
| 9:00 AM-10:00 AM, Lacydon, LRBO-03. LRBO - Balloon and Sounding Rocket Operations , Technical Paper, 15th International Conference on Space Operations , Chair: Alexander Schmidt, alexander.schmidt@dlr.de, German Aerospace Center; Co-Chair: Arnaud Carlier, arnaud.carlier@cnes.fr, CNES | |
| 9:00-9:30 AM | 3 balloon campaigns in 10 months - 3 Outback balloon flights in a fortnight: a challenge made true! V. Dubourg; S. Louvel; C. Lamarque; F. Thoumieux; M. Lacourty; A. Vergnaud; P. Bergos; P. Rebiere; O. Carre; A. DOULIEZ |
| 9:30-10:00 AM | Future, Advanced, Low-cost Micro-Launcher M. Kobald; C. Schmierer; S. Westerlund; K. Tomilin; U. Fischer; S. Schlechtriem |
| 9:00 AM-10:00 AM, Saint-Jean, MDM-06. MDM - Multi-Mission Approaches and Strategies , Technical Paper, 15th International Conference on Space Operations , Co-Chair: Michelangelo Ambrosini, michelangelo.ambrosini@gmail.com, EUMETSAT; Co-Chair: Marco Buemi, marco.buemi@eumetsat.int, EUMETSAT | |
| 9:00-9:30 AM | The Space Tug offer - Operations specificities for On orbit Servicing on the Geo orbit M. Frezet; R. DELAGE; J. Pairet; G. Personne; J. Sommer; C. Cartault; J. Moulin; E. Ferreira |

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| 9:30-10:00 AM | Psyche Science Operations Concept: Maximize Reuse to Minimize Risk C.A. Polanskey; L. Elkins-Tanton; R. Jaumann; D.J. Lawrence; D.M. Marsh; R.R. Moore; R.S. Park; M. de Soria-Santacruz Pic; C.T. Russell; D. Wenkert; D.A. Williams |
| 9:00 AM-10:00 AM, Estaque, SSO-04. SSO - Nanosat Operations and Technology , Technical Paper, 15th International Conference on Space Operations , Co-Chair: Harry Shaw, harry.c.shaw@nasa.gov, NASA-Goddard Space Flight Center; Chair: Ignacio Clerigo, ignacio.clerigo@esa.int, ESA/ESOC | |
| 9:00-9:30 AM | Miniaturizing the Robotic Assembly of Spacecraft: ISAR Development and On-Orbit Demonstration D.L. Wenberg; B.B. Rubio Castaneda; T. Lai; C.B. Wellins; J. Kang |
| 9:30-10:00 AM | Small Satellite Deorbital System using Magnetic Field Controlled Plasma C. Chopra; R. Chandra |
| 10:30 AM-12:30 PM, Notre Dame, CSO-3. CSO - Managing Satellite Constellations , Technical Paper, 15th International Conference on Space Operations , Co-Chair: Mark Danehy, mark.danehy@noaa.gov; Co-Chair: Zeina Mounzer, zeina.mounzer@telespazio-vega.de, Telespazio VEGA Deutschland GmbH | |
| 10:30-11:00 AM | Scaling Fleet Operations: The Growth and Results of SkySat Mission Operations M. Longanbach; L. McGill |
| 11:00-11:30 AM | Lessons Learnt from Experiences Scaling the Operations of Growing Satellite Fleets J.C. Gil; C. Estévez |
| 11:30-12:00 PM | Design Concepts and Challenges for the Iridium NEXT Command and Control System G. Kbidy; G. Adamski; N. May |
| 12:00-12:30 PM | Demand for affordable satellite communications and industry challenges M.N. Moalem |
| 10:30 AM-12:30 PM, Grand Large, DM-10. DM - Advanced Technologies for Space Operations II , Technical Paper, 15th International Conference on Space Operations , Chair: Jay Trimble, jay.p.trimble@nasa.gov, NASA-Ames; Co-Chair: David Welch, welch@lasp.colorado.edu, University of Colorado Boulder | |
| 10:30-11:00 AM | Cloud-based Science Data System Architectures for Next Generation NISAR and SWOT missions H. Hua; M. Hanna; O. Kwoun; H. Mortensen; E. Sayfi; S. Hardman |
| 11:00-11:30 AM | Modernizing Telemetry Displays S. Hurley; D. Jones; M. Baski; P. Viens; B. Williams |
| 11:30-12:00 PM | Monitoring and Control Operations Preparation Framework for EGS-CC Based Environments F. Trifin; A. Walsh |
| 12:00-12:30 PM | Improving Earth Observation Spacecraft Operations with Geovisualization J. da Silva; A. Donati; A. Altenkirch |

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| 10:30 AM-12:30 PM, Joliette, FE-07. FE - Real-Time Flight Control, Lessons and Plans , Technical Paper, 15th International Conference on Space Operations , Chair: Joseph Statman, jstatman@jpl.nasa.gov, Jet Propulsion Laboratory; Co-Chair: Robert Morgenstern, Rob.Morgenstern@nasa.gov, NASA Goddard Space Flight Center | |
| 10:30-11:00 AM | Thousand Times Through the Atmosphere of Mars: Aerobraking the ExoMars Trace Gas Orbiter M. Denis; P. Schmitz; S. Sangiorgi; R. Guilanya; P. Mitschdoerfer |
| 11:00-11:30 AM | In-orbit experience of the Gaia and LISA Pathfinder cold gas micro-propulsion systems J. Marie; F. Cordero; P. Tatry; E. Ecale; D.J. Milligan |
| 11:30-12:00 PM | Turning MMS Star Sensors into High Energy Particle Detectors S.E. shulman |
| 12:00-12:30 PM | Spitzer Space Telescope: Meeting the Engineering Challenges of Extended Mission Operations P.A. Travis; P. Haas; W. Evenson; J.C. Hunt |
| 10:30 AM-12:30 PM, Mucem, GNC-08. GNC - Space Debris and Collision Avoidance III , Technical Paper, 15th International Conference on Space Operations , Chair: Matthew Duncan, matt@space-nav.com; Co-Chair: Christian Reinhardt, christian.reinhardt@dlr.de, German Space Operations Center (DLR-GSOC) | |
| 10:30-11:00 AM | LEO RSO Initial Orbit Determination using Range-only Multi-Bistatic Radar measurements L. Gentile; M. Martorella |
| 11:00-11:30 AM | TAROT: A NETWORK FOR SPACE SURVEILLANCE AND TRACKING OPERATIONS P. Richard; M. Boër; A. Klotz; R. Laugier; J. Dolado Perez; A. Verzeni; L. Lapasset; S. Théron; D. Coward; J. Kennewell |
| 11:30-12:00 PM | Supporting critical operations in GEO with telescopes A. Águeda; D. Escobar; F. Jiménez |
| 12:00-12:30 PM | Coppola 3D Collision Probability - Implementation and Operational Results V. Schaeffer; S. Laurens; P. Seimandi; F. Laporte; F. Delmas |
| 10:30 AM-12:30 PM, Lacydon, LRBO-04. LRBO - Launch Base and Engine Test Facility Operations , Technical Paper, 15th International Conference on Space Operations , Chair: Joan Singer, Jody.Singer@nasa.gov, NASA Marshall Space Flight Center; Co-Chair: Sylvain Guedron, sylvain.guedron@cnes.fr, CNES | |
| 10:30-11:00 AM | The Guiana Space Centre: Towards Space 4.0 B. Chemoul; M. Morodo Testa |
| 11:00-11:30 AM | Future Launchers: Operational Ground Concepts for a Competitive Launch Base O. Frenoy; L. Appolloni; M. Garcia |
| 11:30-12:00 PM | How to put a Launcher Test facility into operation A. Frank; D. Leiß; J. Reinhold |

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| 12:00-12:30 PM | Performance of Vinci engine tests at PF52 test bench O. LAGNEL |
| 10:30 AM-12:30 PM, Saint-Jean, PS-08. PS - Ground Stations II , Technical Paper, 15th International Conference on Space Operations , Chair: Vladimir Nazarov, Vladimir.Nazarov@cosmos.ru, IKI RAN; Co-Chair: Falk Mrowka, Falk.Mrowka@dlr.de, German Aerospace Center | |
| 10:30-11:00 AM | Ground Station Network Scheduling through Genetic and Deterministic combined algorithm R. Falone; G. Corrao |
| 11:00-11:30 AM | Ground Station Pass Allocation in Operations using AI S. Fratini; N. Policella; A. Donati; N. Faerber; B. Teixeira De Sousa |
| 11:30-12:00 PM | Autonomous Multi-Mission Antenna Reservation System – Its Design and Integration J. Levesque; P. Côté |
| 12:00-12:30 PM | Integrated Planning and Scheduling for NASA's Deep Space Network – from Forecasting to Real-time M. Johnston; J. Lad |
| 10:30 AM-12:30 PM, Estaque, SSO-05. SSO - Flight Operations , Technical Paper, 15th International Conference on Space Operations , Chair: Eugene Avenant, eavenant@sansa.org.za, The South African National Space Agency; Co-Chair: Senelisiwe Magagula, gmagagula@sansa.org.za, South African National Space Agency | |
| 10:30-11:00 AM | The ESA OPS-SAT Mission: Don't just say there is a better way, fly it and prove it D.J. Evans; A. Donati |
| 11:00-11:30 AM | Solid Positive Thruster (SPoT) – An introduction to a novel solid fuel thruster without grids or magnets T. Petty; C. Ballage; D. Lundin; T. Minea |
| 11:30-12:00 PM | ANGELS NanoSat: Demonstrator for new French product line S. Salas Solano; H. Darnes; C. Rossiquet; L. Gillot; F. Viaud; N. Rey; T. Cussac; P. Lariviere; D. Delacroix; L. Javanaud; E. Dequeker |
| 12:00-12:30 PM | Streamlining Ground Station Network Compatibility Test for Small Satellites S. Schaire; M. Lamberson; S. Bundick; C. Roberts; L. Ambrose; J. Mason; S. Altunc; Y.F. Wong; J. Baros; P. Celeste; M. Bollard |