| Wednesday 11th | | |
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| | High Bay | |
| 09:30 | **Welcome and Opening**<br>Dietmar Pilz (Director of Technology, Eng. & Qualit / ESA)<br>Massimo Crisci (Head of End to end Systems Division / ESA) | |
| 09:45 | **General Introduction**<br>CNES, DLR, ESA | |
| 10:00 | **Panel Ensuring PVT on Earth and beyond**<br>Moderated by Prof. Marco Luise (University of Pisa)<br><br>*Interference*<br>Dr. Todd E. Humphreys (The University Of Texas At Austin)<br><br>*GNSS Spoofing in the Civil Aviation Sector*<br>Dr. Ramsey Faragher (Royal Institute of Navigation)<br><br>*GNSS interference, view from space*<br>Dr. John E Ward, Dr. Philip Jales (Spire Global)<br><br>*Protecting the Mass Market*<br>Mr. Javier De Salas (Broadcom) | |
| 11:40 | Coffe break | |
| 12:00 | ***ESA Shaping the Future of Navigation***<br>*Marco Falcone (Head of Future Navigation Department / ESA)* | |
| 12:20 | **Galileo and EGNOS, general updates**<br>Jörg Hahn (Head of Galileo System Engineering Service / ESA) | |
| 12:40 | ***EGNSS Updates***<br>*Peter Buist (Head of Galileo Reference Center / EUSPA)* | |
| 13:00 | Lunch break (Main Restaurant) | |
| | High Bay | Auditorium |
| | **A1 - Signal Design and Processing**<br>Dominik Dötterböck, UniBW<br>Stefan Wallner, ESA | **B1 - Advancements in GNSS Receivers**<br>Mohamed Bochkati, UniBW<br>Gerarda De Pasquale, ESA |
| 14:00 | *Revisiting Band-Limited DS/SS Signal Design for GNSS* (Prof. Marco Luise, University of Pisa) | *Impact of GNSS receivers on GNSS antenna performance prediction for automotive scenarios* (Mr. Johannes Kröger, Leibniz University Hannover) |
| 14:20 | *On the synthetic meta-signal multipath resistance: a Galileo and BeiDou analysis* (Mr. Giovanni Cappello, University of Naples "Parthenope") | *The final front-end: an All-bands GNSS direct RF sampling front-end based on an RF System-on-Chip* (Dr. Javier Arribas, CTTC) |
| 14:40 | Assessing positioning availability and performance when exploiting next-generation signals from Galileo (Mr. Freddy Albert Pinto Benel, GMV) | *On the Integration of Approximate Computing in GNSS Signal Processing for Improved Energy-Efficiency* (Mr. Antoine Grenier, Tampere University) |
| 15:00 | *Long Term Ephemeris (Data) for improved Time To First Fix (TTFF)* (Mr. Vicente Lucas Sabola, ESA) | *Innovative approach for analogue beamforming GNSS receiver* (Paolo Crosta, ESA) |
| 15:20 | Coffe break | |
| | **A2 - Innovative Testing and Algorithms for Enhanced GNSS Receiver**<br>Dr. Konovaltsev Andriy, DLR<br>Edward Breeuwer, ESA | **B2 - Real-Time Navigation and Quantum Potential**<br>Dr. Garcia Crespillo Omar, DLR<br>Dimitrios Vasileios Psychas, ESA |
| 16:00 | *Wideband multichannel system for testing advanced gnss receivers and new antenna technologies* (Miss Samah Chazbeck, National Instruments - NI (emerson)) | *Inter-Satellite Link Network Real-Time Ring Dissemination Performance and Robustness* (Mr. Enrico Edoardo Zini, Thales Alenia Space Italy) |
| 16:20 | *Continuous Integration and Deployment for Hardware-In-The-Loop embedded Global Navigation Satellite System Software Defined Receiver (GNSS-SDR) systems* (Mr. Xavier Guerrero-Pau, CTTC) | *Real-time Absolute Kinematic Positioning using Galileo High Accuracy Service (HAS)* (Reha Metin ALKAN, Istanbul Technical University (ITU)) |
| 16:40 | *Implementation and Evaluation of Multipath Mitigation Algorithms in GNSS PPK Using Smartphone Data in Urban Environments* (Mr. Andrea Maffia, Unige - University of Genova) | *Potential and Challenges of Quantum Navigation for a Future Earth-Moon Mission* (Dr. Alireza HosseiniArani, Leibniz University Hannover) |
| 17:00 | *Zero Baseline Evaluation of RTK Integrity Monitoring with Ambiguity Resolution* (Dr. Omar Garcia Crespillo, DLR) | |
| 18:00 | Conference Dinner (Main Restaurant) | |

| Thursday 12th | | |
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| | High Bay | Auditorium |
| | **A3 - LEO-PNT Performance and Interference Challenges**<br>Prof. Todd Humphreys, The University of Texas at Austin<br>Florin-Catalin Grec, ESA | **B3 - Science Applications**<br>Prof. Sandra Verhagen, TU Delft<br>Richard Swinden, ESA |
| 09:00 | *Multiple Access Interference Challenges in GNSS: The Role of Emerging LEO-PNT Constellations* (Mr. Florian Beck, DLR) | *DANGO - Danish National Galileo Overlay* (Ms. Magdalena Golofit, DTU Space, Technical University of Denmark) |
| 09:20 | *OTFS Achievable Ranging Performance in LEO Urban Areas* (Mr. Guillem Foreman-Campins, Tampere University / Universitat Autònoma De Barcelona) | *Implementation of a thrust model for an Extended Kalman Filter implemented in a GNSS receiver for geostationary orbit* (Ms. Anna Care', Thales Alenia Space Italia) |
| 09:40 | *Tracking Starlink signals using Luneburg Lens* (Dr. Noori Bni Lam, ESA) | *ESA Scout HydroGNSS: The use of Spaceborne GNSS Reflections to Monitor Hydrological Climate Variables* (Dr. Martin Unwin, SSTL) |
| 10:00 | *Evaluating ARAIM Techniques for GNSS and LEO-PNT Positioning: A Dedicated Test Bench Analysis (Mr. Heiko Engwerda, Royal Netherlands Aerospace Centre)* | *Complementing GNSS-R with LEO PNT signals: mission design impact and potential scientific benefits* (Eng. Juan Manuel Parro, ESA) |
| 10:20 | *Impact of Modelling Errors on LEO-PNT Performance: A Brief Numerical Investigation on Ambiguity-Fixed Positioning.* (Mr. Lotfi Massarweh, Delft University of Technology) | *Genesis - ESA's Mission for Reference Frame Improvement* (Ms. Sara Gidlund, ESA) |
| 10:40 | Coffe break | |
| | **A4 - LEO-PNT: Signal Processing Innovations**<br>Filipe De Oliveira Salgueiro, ESA<br>Marco Anghileri, ESA | **B4 - GNSS Security & Signal Quality Monitoring**<br>Osenberg Hendrik, DLR<br>François-Xavier Marmet , CNES |
| 11:20 | *Adaptation of a GNSS open-source receiver for analysis of LEO-PNT scenarios* (Dr. Fran Fabra, Universitat, Autònoma De Barcelona) | *Enhancing GNSS Security with Open-Source OSNMA Integration in GNSS-SDR* (Dr. Carles Fernandez-Prades, CTTC) |
| 11:40 | *Coherent Tracking of Globalstar Signals Using Partially-Known Spreading Codes* (Mr. Orlando Peña, Ieec) | *Temporal analysis of high-rate GPS satellite differential code biases for signal monitoring and anomaly detection* (Dr. Gerardo Allende-Alba, German Aerospace Center) |
| 12:00 | *Deep Learning Coarse Doppler Estimation for LEO Signals of Opportunity* (Mr. Joaquin Gáñez Fernández, UAB - UNIR) | *Security Protection Levels for GNSS PVT Assurance with a 5G NTN LEO Satellite* (Miss Laura Crosara, University Of Padova) |
| 12:20 | *Optimization of OFDM-Signals for Ranging within Communication Bands* (Mr. Dominik Dötterböck, University Of The Bundeswehr Munich) | *Low-Cost Realtime Signal Quality Monitoring* (Prof. Götz Kappen, FH Münster) |
| 12:40 | *Versatile Signal Generator for LEO-PNT Navigation Satellite Payloads* (Ms. Maria Manzano Jurado, GMV) | *Low-cost SDR platforms for multi-frequency GNSS synchronous acquisition* (Dr. Rafael Terris-Gallego, Universitat Autonoma Barcelona (UAB)) |
| 13:00 | Lunch break (Main Restaurant) | |
| | **A5 - LEO-PNT: In-Orbit Demonstrations and Advanced Signal Design**<br>Thoelert Steffen, DLR<br>Javier Miguez, ESA | **B5 - Innovations in Antenna Design for Resilient Positioning Solutions**<br>Prof. Jose Lopez-Salcedo, UAB<br>Prof Goetz Kappen, FH Münster |
| 14:00 | *In-orbit Demonstration of an FPGA-based GNSS Receiver on-board a LEO Satellite* (Mr. Carlos Davis Huerta, M3 Systems) | *Resilient GNSS Coarse Positioning based of Angle of Arrival Estimates* (Dr. Noori Bni Lam, ESA) |
| 14:20 | *In-orbit demonstration of Precise Point Positioning for real-time on-board high-accuracy orbit estimation of LEO satellites* (Mr. Bart Kevers, Fugro Innovation and Technology) | *A Galileo PRS compatible CRPA for an enhanced and more robust GNSS PNT solution* (Dr. Rubén Morales Ferré, Indra Espacio) |
| 14:40 | *Leveraging Signals of Opportunity for Precise LEO Orbit Determination in the Future Satellite Landscape* (Mr. Pedro Navarro, GMV) | *A 7-elements integrated GNSS multi-band antenna array with custom active stacked patches* (Dr. Fermín Mira Pérez, CTTC) |
| 15:00 | *LEO-PNT Signal-In-Space Design Options* (Jose Antonio Garcia Molina, ESA) | *GRATE Multi-Element Antenna for Accurate GNSS Measurements* (Mr. Jacobus A Kegel, Eindhoven University Of Technology) |
| 15:20 | Coffe break | |
| | **A6 - Applications in Orbit**<br>Dr. Giorgi Gabriele, DLR<br>Elizabeth Laier English, ESA | **B6 - Ensuring GNSS Resilience: Interference Detection and Mitigation Strategies**<br>Muhammad Hameed, UniBW<br>Gianluca Caparra, ESA |
| 16:00 | *Enhanced Autonomous Navigation with Combined X-ray Pulsar and Optical Sensor Integration* (Ms. Sui Chen, Politecnico Di Milano) | *Assessment of Interference Detection Techniques for Maritime Applications with Field Data from the Baltic and North Seas* (Mr. Thiago Azevedo de Vasconcelos, DLR) |

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| 16:20 | *GNSS Autonomous On-Board Navigation with Inter-Satellite Links and Uplink Stations* (Mr. Marco Laurenti, Thales Alenia Space) | *Comparison of Different Vector Tracking Architectures in Challenging Urban Environments Using the TEX-CUP Data Set* (Mr. Christian Siebert, German Aerospace Cente) |
| 16:40 | *A Novel Method for Galileo E1 Acquisition in Low Earth Orbit* (Miss Abi Yetton, University Of Surrey / SSTL) | *The Impact of Radio Frequency Interference and Spoofing on GNSS Reliability at Baltic Sea* (Mr. Hakan Uyanik, DLR) |
| 17:00 | *Marconi Mid End GNSS Receiver: a new product in the European market* (Alberto Zin, Thales Alenia Space) | *Analysis of a Mass Market GNSS Receiver in the Presence of Different Jamming Signals transmitted During the Norwegian JammerTest 2023* (Miss Cécilia Kalmeijer, ESA) |
| 17:20 | *On-board Orbit Determination and Time Synchronization for Large Constellations of Satellites by means of a Distributed Extended Kalman Filter and Inter-Satellite-Link Scheduling Optimization Algorithms* (Mr. David Vázquez Enríquez, GMV) | *Combining SAGE and LMS for Blind Multipath Mitigation in GNSS Receivers* (Miss Lucía Pallarés-Rodríguez, Universitat Autònoma de Barcelona) |

| **Friday 13th** | | |
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| | High Bay | Auditorium |
| | **A7 - Navigating the Lunar Frontier**<br>Thomas Junique, CNES<br>Cosimo Stallo, ESA | **B7 - Innovations in Positioning with 5G/6G-Enabled Satellite Networks**<br>Thomas Pany, UniBW<br>Ivan Lapin, ESA |
| 09:00 | *Kalman filter based integrity for Lunar applications* (Mr. Heiko Engwerda, Royal Netherlands Aerospace Centre) | *Positioning-Enabled 5G and 6G Satellite Networks: Use Cases and Key Technologies* (Mr. Kai-Niklas Baasch, Leibniz University Hannover) |
| 09:20 | *NaviMoon – preparing the In-Orbit Demonstration of GNSS-based navigation in cis-lunar space* (Mr. Michele Scotti, Spacepnt) | *Opportunistic 5G NR Ranging in dense Urban Environments* (Dr. Jorge Querol, University Of Luxembourg) |
| 09:40 | *Development and assessment of a LUNAR PNT based on future LCNS* (Ms. Maria Manzano Jurado, GMV) | *Code Phase Estimation with Live 5G NR-NTN Ka-band Signal from LEO Satellite Using STARE* (Dr. Ivan Lapin, ESA) |
| 10:00 | *Enhancing ranging measurements through the provision of differential corrections for Lunar satellite navigation systems* (Dr. Stefano Garlaschi, Qascom srl) | *Evaluation of RIS-Enabled B5G/6G Indoor Positioning and Mapping using Ray Tracing Models* (Prof. Vassilis Paliouras, University of Patras) |
| 10:20 | *LunaNet Interoperability Standard – Consolidation of the Augmented Forward Signal Specification* (Mr. Floor Thomas Melman, ESA) | *USRP-Based Single Anchor Positioning: AoA with 5G Uplink Signals, and UWB Ranging* (Mr. Thodoris Spanos, LOCTIO P.C./University of Patras) |
| 10:40 | Coffe break | |
| | **A8 - Space Navigation and Space Situational Awareness**<br>Noori Bni Lam, ESA<br>Lionel Ries, ESA | **B8 - Autonomous Vehicles and Mobile Applications**<br>Simona Circiu, ESA<br>Nityaporn Sirikan, ESA |
| 11:20 | *Future Earth-Moon Navigation with Kalman Filter Based on Quantum Inertial Sensor Systems* (Ms. Arpetha Chikkamavathur Sreekantaiah, Leibniz Universität Hannover) | *Approaching GNSS Positioning Safety Analysis for Autonomous Vehicles via Rare Event Simulation,* Mr. Sebastian Ciuban, Delft University Of Technology) |
| 11:40 | *Preliminary geometry analysis for a solar system navigation constellation* (Mr. Felix Abel, ESA) | *High-Accuracy Galileo-based Autonomous Mobile Mapping System* (Dr. Ismael Colomina, Geonumerics) |
| 12:00 | *Enhancing Space Situational Awareness with Galileo Receivers' Modern Services: The SARGASSIA System* (Andrea Piccolo, European Commission's Joint Research Centre) | *A Flexible Multi-Frequency Software-Defined Open-Source Vector Tracking GNSS Receiver* (Mr. Miguel Angel Gomez Lopez, Instituto Nacional De Tecnica Aeroespacial) |
| 12:20 | *Relative positioning of astronauts around Rovers and Landers using UWB* (Dr. Ovidiu Ratiu; Control Data Systems SRL) | *PPP Performance Assessment for Galileo HAS Mobile Users in Different Environments* (Eng. Elena Galletti, ESA) |
| 12:40 | **Closing session & Competition Award** | |
| 13:30 | Farewell Lunch | |