ESAW 2026

Platforms for exploring Earth and beyond – Towards a smart and resilient ground segment

Day 1 – Wednesday, 15th of April 2026

ESA-ESOC | Darmstadt, Germany

ESAW 2026 - DAY 1

Time (CEST)	Conference Centre (first floor)	Press Centre (ground floor)
08:00 – 09:00	Registration and Morning Coffee	
09:00 – 09:30	Welcome Speech & Logistics & Safety Briefing	
09:30 – 10:15	Keynote: Cybersecurity in Space: A Collective Responsibility	
10:15 – 11:00	**Poster Session & Coffee Break**	
	25 A Decade of Evolution: DTN Resilience and Direct IP Connectivity in LEO on ESA's OPS-SAT (2015–2024) | Aggelis A, Zagkos D, Vangelatos C | Hellenic Aerospace Industry	
	13 A Robust Architecture Pattern for Integrating AI Operators in Space Systems | Leidig K, Nehlich P | University of Stuttgart, Institute of Space Systems	
	19 GX-CC: Multi-Mission Operations at GSOC based on EGS-CC | Brügge T, Polzin H, Hagen C, Stangl C | GSOC	
	42 Cyclic Intelligent Redundancy System of Multiple Logical Rings (CIRS-MLR): A Distributed Cyclic Architecture for Resilient Mission Ground Segment Operations Fassel P | Independent Researcher	
	53 Model-Based Continuity Across Engineering and Operation in Monitoring and Control Systems | Zorba O, Pannella A, Trebbin N | SSC Space	
	52 Integrating Non-Space Elements into Mission Control Systems Using a Modular Architecture | Pannella A, Zorba O, Trebbin N, Brach L | SSC Space	
	Conference Centre (first floor)	**Press Centre (ground floor)**
	Ground Segment Platforms & Modernisation	**Data Foundations, Archiving, Synthetic Data & AI Ecosystems**
11:00 – 11:20	**31** An Evolutionary Platform Architecture for Secure, Automated and Sustainable Ground Segments | Ramos G(1), Ribeiro D(1), Pozo V(1), Calvo Chevillat B(1), Rodriguez-de-Andres P(2) | (1) GMV, (2) ESA-ESTEC	**33** AI READY MULTI MISSION AND MULTI ASSET ARCHIVING (AIMA) | Veskos P(1), Petreski H(2), Zimmer T(3) | (1) Software Competitiveness International S.A., (2) Software Competitiveness International GmbH, (3) ESA/ESOC
11:25 – 11:45	**38** Maturing EGOS-MG into an Operational and Secure Multi-Mission Ground Systems Platform - Alas D, Bhuvanagiri P, Walsh A | GMV	**8** SYNDAQ – Synthetic Data Generation and Qualification | Martinez J(1), Fleith P(1), Rojczyk K(1), Madhogaria S(2), Ehmann F(2), Gobi A(3), Molinari D(3), Toso S(3), Ntagiou E(4), Eggleston J(4) | (1) Solenix Engineering GmbH, (2) Telespazio, (3) Fondazione Bruno Kessler (FBK), (4) European Space Operations Centre
11:50 – 12:10	**18** Are the Clouds Clearing on the Ground? Redesigning Ground Segments for Secure Constellations | Cocci E, Hall S | Telespazio Germany GmbH	**47** Unsupervised Anomaly Detection Vivero J, Tejedor M | GMV
12:15 – 12:35	**50** Architecture and Innovations for ESA's Space Weather Payload Data Centre Magyar N | Starion Group	Cloud Data Delivery Standards - Beyond SLE Dreihahn H | ESA
12:40 – 14:00	**Lunch Break**	
	Planning, Scheduling & Real-Time Mission Operations	**AI for Spacecraft Health Monitoring**
14:00 – 14:20	**15** Toucans – Reactive ground station scheduling for the next decade and beyond | Wiesner S, Fruth T, Wörle M | Deutsches Zentrum für Luft- und Raumfahrt (DLR)	**9** SMAI - Satellite health Monitoring AI-powered suite Martinez J(1), Policella N(1), Strasburger M(1), Erdogan A(1), Figueiredo M(1), Figueiredo J(1), Rojczyk K(1), Cao H(1), Moro A(2), Helmsauer K(2), Bortolotto M(3), Svaizer P(3), Cristoforetti M(3), Hegwein F(4), Bankanal R(4), Canio G(5), Eggleston J(5), Tran D(5) | 1 Solenix Engineering GmbH, 2 DLR - GSOC, 3 Fondazione Bruno Kessler (FBK), 4 Airbus, 5 European Space Operations Centre
14:25 – 14:45	**23** PintaOnWeb – enabling versatile solutions for interactive planning and scheduling | Wiebigke A, Schöpf A, Wörle M | German Space Operations Center (GSOC), Mission Technology Department	**20** Upgrading AI services in an operational satellite health monitoring system | Del Moro A, Leidreiter D, Quirino Savelli de Menezes P, Helmsauer K, Göttfert T | Deutsches Zentrum für Luft- und Raumfahrt, German Space Operations Center (DLR - GSOC)
14:50 – 15:10	**28** IDEPlan - an advanced platform to close the end-to-end planning chain Jenkins R, Berry L | GMV	**36** Embedding Machine-Learned Anomaly Detection into Relevance-Driven Mission Operations Workflows | Bellomi D(1), Zuccoli V(1), Magaudda E(1), Guzzo A(1), Cocci E(2), Lora A(2), Bullmann J(2) | (1) Intella, (2) Telespazio Germany
15:20 – 15:40	**32** Intelligent Ground Operations System | Allik M, Lodi S | Spaceit	**21** Enhancing Spacecraft Health Monitoring through AI Driven Anomaly Detection: Integrating GOSMIC with gifted_GENE | Frouvelle N(1), Capitanelli A(2), Cros P(1), Thomas C(1), Caronte F(2), Casciola N(2), Campagna G(2) | (1) CS Group, (2) Aiko space
15:40 – 16:10	**Coffee Break**	
	Human-Centric Operations	**AI Assistants, Predictive Ops & Intelligent Engineering**
16:10 – 16:30	**46** Enhanced Operations with UX/UI Design | Vivero J, Segatto M | GMV	**45** From Search to Sensemaking: A Multi-Agent AI Assistant for Mission Operations at ESOC and GSOC (OCAI-NG) | Sondhi A, Weitz B | GMV
16:35 – 16:55	**30** Instructional Design in the Software Development Lifecycle - Where to start training media production and how? | Höhner B | Telespazio Germany GmbH	**10** Enhancing SDLC Test and Validation Tasks via Artificial Intelligence Salor Moral N(1), V. Ntagiou E(2), Di Luca A(3), Welge T(4), Ernst H(5), Stoitsev T(6) (1) Starion Group, (2) European Space Operations Centre, (3) Fondazione Bruno Kessler, (4) FEV etamax GmbH, (5) Airbus Defence and Space GmbH, (6) SpaceCube GmbH
17:00 – 17:20	**17** Orchestrating the Ground Segment: A Reference Architecture for API-Driven Constellation Automation Cocci E, Hall S | Telespazio Germany GmbH	**34** Pilot Digital Twin Spacecraft: An End-to-End Digital Twin Concept for Space Missions from AIT to Operations | Werner B(1), Antonello F(2), Birn R(3), Eisenmann H(3), Gupta A(6), Müller A(5), Otton A(6), Schäfer S(1), Shrestha R(4), Weißenseel S(1), Wenzel K(4) | (1) Telespazio Germany GmbH, (2) ESA/ESOC, (3) Airbus Defence and Space GmbH, (4) Fraunhofer IWU, (5) ScopeSET GmbH, (6) Jotne Connect
17:25 – 17:45	**12** Extending long-term visual satellite health monitoring beyond telemetry Leidreiter D, Del Moro A, Göttfert T, Lesch T, Noll S | German Aerospace Center (DLR), Space Operations and Astronaut Training	
19:00 – 23:00	**Aperitif and hosted dinner | Das Roeders - Rheinstraße 99, Darmstadt**	

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Day 2 – Thursday 16th of April 2026

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ESAW 2026 - DAY 2

Time (CEST)	Conference Centre (first floor)	
08:00 – 09:30	Registration and Morning Coffee	
09:30 – 10:30	Panel: How to meet the challenges of dual use ground segments?	
	Conference Centre (first floor)	**Press Centre (ground floor)**
10:30 – 11:00	**Coffee Break**	
	Automation & Orchestration for Constellations	**Cybersecurity & ZeroTrust Operations**
11:00 – 11:20	**16** The Orchestrator: A Unified Architecture for Automation in the Galileo Ground Segment | Ott M(1), Genovese D(1), Denis B(2) | (1) GMV, (2) ESA	**37** A generic zero-trust architecture for ground-segment systems Calado Alas D(2), Demircan K(1), Kuppusamy B(1), Laroque C(1), Marszk D(3), Niezette M(1), Weber A(1) | (1) Telespazio Germany GmbH, (2) GMV GmbH, (3) ESA
11:25 – 11:45	**35** Lights-Out System for automation of operations & mission planning for a fleet | Heinen W | Starion Group	**40** A DevSecOps guide for your Ground segment Fradique R, Olchawa A, Starcik M, Cirne A, Smith T | Visionspace
11:50 – 12:10	**29** Astral Dash: A System-of-Systems Approach to Scalable Fleet and Constellation Operations | Shafi R(1), Eggleston J(3), Clark C(1), Salor Moral N(2), Paramanantham D(1), Beltrami P(2), Pidgeon A(1) | (1) Starion Group, (2) Starion Group, (3) ESA	**49** Patching vs Passive and active Vulnerability detection for Space Ground Control Segment | Vivero J, San Miguel D | GMV
12:15 – 12:35	**22** Enabling Europe's Autonomy and Resilience Through a Next-Generation Ground Segment for Large-Scale Constellations | Frouvelle N, Thomas C, Cros P, Pipo C | CS Group	**44** Securing the Future Solar System Internet | Baumgaertner L | ESA
12:40 – 13:50	**Lunch Break**	
	Simulation & Emulation for Future Missions	**EGS-CC/Pulse Adoption & Operationalisation**
13:50 – 14:10	**51** The next generation of ESA SIMULUS Emulator: a new design to improve performance and usability in operational simulators for future missions. Martinho T(1), Simões T(2), Irvine M(1), Freitag T(1), Ingenito A(1) | (1) Telespazio Germany, (2) ESA	**11** ExoMars ROCC Modernization Study based on Pulse Adoption Fiorella F(1), Villa A(1), Bussi D(1), Picco C(1), Riorda A(1), Rovera A(1), Kowalczyk A(2) | (1) ALTEC S.p.A., (2) European Space Agency
14:15 – 14:35	**48** RCCSIM: A Multi-Mission Operational Simulator Framework for the ROSE-L, CIMR and CHIME Copernicus Expansion Missions | Kato T, Antúnez A, Whitty J, Jochec J | Terma GmbH	**14** SOIL: The generic and adaptive mission control systems concept used within the LUNA Analog Facility | Hagen C, Arnold S | German Aerospace Center
14:40 – 15:00	**7** Future of Emulators and Simulation Technologies for Ground Segment Caserman P, Segneri D, Antonello F, Simoes T, Widegard K | ESA/ESOC	**54** Automated Scenario Validation as a link between requirements engineering and validation activities | Walczak D(1), Czaplicka A(1), Livschitz J(2) | (1) Bit By Bit Sp.zo.o., (2) ESA/ESAC
15:05 – 15:25	**43** ATENA ATOP - procedure validation, debugging and authoring suite for OPS and AIT – a case study for unification of data processes | Wawrzyniak M, Szumigalski M, Filipiak T, Springer T | ITTI Sp. Z o.o.	**27** From Development to Deployment: Realizing Operational Use of the Columbus MCS-R | Trebbin N, Hermannsdörfer N, Schröder-Lanz A, Musudi K, Kecaj O | SSC Space
15:30 – 16:00	**Coffee Break**	**Coffee Break**
	Delay-Tolerant Networking & Advanced Communications	
16:00 – 16:20	**41** Architecting LunaNet-Ready Ground Stations Using Delay and Disruption-Tolerant Networking | Montilla A(1), Montilla Ochoa A(1), Hill E(2) | (1) Spatiam Spain, (2) Spatiam Corporation	**Guided Tours at 16:00** **Meeting point next to the building reception desk**
16:25 – 16:45	**26** A Decade of Evolution: DTN Resilience and Direct IP Connectivity in LEO on ESA's OPS-SAT (2015–2024) | Aggelis A, Zagkos D, Vangelatos C | Hellenic Aerospace Industry	
16:50 – 17:10	**5** openvocs Next generation voice communication | Töpfer M | DLR e.V.	
17:15 – 17:35	**39** ESA's new Space Weather Payload Data Centre - Scope and Vision Klug J | ESA/ESOC	