

FINAL PROGRAM H-SPACE 2026, May 21-22, 2026

as of May 21, 2026

Website: <https://space.bme.hu>

Day 1, May 21

(hybrid: presenters in person in Budapest, participants in person and online)

Building I, IB.026

Budapest University of Technology and Economics

Magyar tudósok krt. 2, H-1117, Budapest, Hungary

13:15 Onsite registration opens

14:00 Opening of the conference

Master of ceremony: László Bacsárdi, Budapest University of Technology and Economics

Gergely Zaránd, Vice Rector, Budapest University of Technology and Economics

Tibor Kapu, Hungarian astronaut

Kálmán Kovács, President, Hungarian Astronautical Society

14:20 Keynote

Making the Case for Human Centered Design in the Space Sector

Tibor Bálint

Royal College of Art, London

15:00 Poster flash talks

1 minute poster flash talks

15:45 Coffee break and poster session

16:30 Session Science and Technology 1

12 min talk + 3 min Q&A

Session chair: Kálmán Kovács, Budapest University of Technology and Economics

Highlight talk

Hunity (NMHH-1) The Sixth Educational 3-PocketQube Class Student Satellite at BME

Levente Dudás

Budapest University of Technology and Economics, Budapest, Hungary

Talk 1

The energy supply for the first twin satellite of Győr

Ágoston Koppány Szűcs Space and Defense and Space Law Research Center, Győr, Hungary

Talk 2

Development of a compact autonomous biological sample measurement device for sounding rockets

Roland Reviczki

Budapest University of Technology and Economics, Budapest, Hungary

Talk 3

In-Orbit Investigation of Passive Thermal Control Coatings: The Seraph Experimental Payload on the HUNTER 3PQ Satellite

Máté László Magó

Budapest University of Technology and Economics, Budapest, Hungary

Talk 4

Raman microscopy for monitoring calcium carbonate formation in microgravity

István Sütő

University of Szeged, Szeged, Hungary

Talk 5

Determination of satellite rotation periods using optical tracking observations

Péter Bana

SP, Budapest, Hungary

Talk 6

VGIS: A Prototype Planetary GIS for Research, Mission Planning, and Outreach

Henrik Hargitai

HUN-REN, Budapest, Hungary

18:30 Wrap up of the first day László Bacsárdi

18:45 Side event organized by the Women in Aerospace Europe and Space Generation Advisory Council

Panel discussion with Hanga Katreiner and Klaudia Vivien Simon on analogue astronaut missions

(in Hungarian)

20:30 End of the side event

Day 2, May 22

(full online, via Microsoft Teams)

9:30 Welcome of the second day

9:35 **Invited talk** *ESA Earth Observation Programmes and Opportunities*
Eleni Paliouras, European Space Agency (ESA)

10:05 **Session Science and Technology 2** 12 min talk + 3 min Q&A
Session chair: Péter Kristóf, Hungarian Association for Innovation

Talk 1	From PocketQube flight hardware to MSc laboratory: A hybrid magnetic-reaction wheel ADCS demonstrator <i>Tibor Herman</i> <i>Budapest University of Technology and Economics, Budapest, Hungary</i>
Talk 2	Impact of Non-Linear Filtering on Soft-Decision Metrics in PocketQube GMSK Reception <i>Ádám Kiss</i> <i>Department of Technical Informatics, University of Szeged, Szeged, Hungary</i>
Talk 3	Scintillation counter experiment aboard the HUNITY (NMHH-1) satellite <i>Roland Gerendás</i> <i>Budapest University of Technology and Economics, Budapest, Hungary</i>
Talk 4	Post-Harvest Tillage Detection Using Sentinel-1 Coherence Time Series <i>Annamária Szalóki</i> <i>Envirosense Hungary Ltd., Debrecen, Hungary</i>
Talk 5	Quantum-Assisted Uplink Coordination for Distributed Satellite Communication Systems <i>Roaa Algayyim</i> <i>Budapest University of Technology and Economics, Budapest, Hungary</i>
Talk 6	Investigation of satellite link operating at Ka-band regarding climate variation <i>Tra My Tran</i> <i>Budapest University of Technology and Economics, Budapest, Hungary</i>
Talk 7	Demonstrating Entanglement-Based QKD Over a Metropolitan Free-Space Channel – A Practical Evaluation <i>Ákos Uzonyi</i> <i>Budapest University of Technology and Economics, Budapest, Hungary</i>
Talk 8	Generative AI-Driven Interpolation of Land Surface Features: A Multimodal Approach <i>Bende Barcza</i> <i>Budapest University of Technology and Economics, Budapest, Hungary</i>

12:05 Lunch break

13:00 **Session Education, Outreach, Economy** 12 min talk + 3 min Q&A
Session chair: Árpád Kis, HUN-REN Institute of Earth Physics and Space Science

Highlight talk	Tracing the Long-Term Financial Development of the European Space Agency <i>Jonas Tobiasen</i> <i>International Space University, Strasbourg, France</i>
Talk 1	Electrical power system of HUNITY PocketQube satellite integrated into space engineering education <i>Péter Püspöki</i> <i>Budapest University of Technology and Economics, Budapest, Hungary</i>
Talk 2	From Historic Observatory to Multisensory Science Center: The Evolving Public Engagement Model of the Svábhegyi Observatory <i>Petra Sági</i> <i>Svábhegyi Observatory, Budapest, Hungary; HUN-REN CSFK Konkoly Observatory, Budapest, Hungary</i>
Talk 3	HunEdu - Earth Observation curriculum development <i>Levente Ronczyk</i> <i>DATelite Ltd, Pécs, Hungary</i>
Talk 4	Mission planning and planetary science education at ELTE <i>Ákos Kereszturi</i> <i>Konkoly Astronomical Institute, Research Centre for Astronomy and Earth Sciences, HUN-REN, Budapest, Hungary</i>
Talk 5	ARISS as a STEM Experience in a Hungarian Secondary School <i>Sándor Csirmaz</i> <i>Petőfi Sándor Lutheran High School, Mezőberény, Hungary</i>
Talk 6	Key lessons from the success of the Hungarian CanSat competition <i>Donát Takács</i> <i>Hungarian Astronautical Society, Budapest, Hungary</i>
Talk 7	Experimental Rockets and CanSats Built by High School Students <i>Botond Kis</i> <i>Bajai TIE Ballon és Rakéta Szakosztály, Baja, Hungary</i>
Talk 8	Mentoring high-agency STEM projects: student-driven space engineering teams beyond the classroom <i>Andras Kontsek</i> <i>MANT CanSat competition, Budapest, Hungary</i>

15:30 Closing remarks

Poster presentations

Poster 1	A 144 MHz Digital Earth–Moon–Earth Demonstration Day Inspired by Zoltán Bay: A Reproducible Outreach Protocol with Measurement Logging and On-Site Decoding <i>Péter Ernő Németh Széchenyi István Egyetem, Győr, Hungary</i>
Poster 2	A Techno-Economic Evaluation of High-Altitude Balloon Systems for Low-Cost Near-Space Access <i>Flórián Balázs Vámosi Hungarian University of Agriculture and Life Sciences, Kaposvár, Hungary</i>
Poster 3	Advanced Composite Systems for Psychophysical Habitat Engineering: A Multidisciplinary Nexus of Art, Sustainability, Space Materials Science and Environmental Psychology <i>Kinga Tamási</i>
Poster 4	AI-Based Fusion of Optical and Radar Data for Inland Surface Water Monitoring <i>Yahya Ibrahim HUN-REN Institute for Computer Science and Control (SZTAKI), Budapest, Hungary</i>
Poster 5	Analyzing dynamic quantum satellite network using window based aggregation <i>András Mihály Budapest University of Technology and Economics, Budapest, Hungary</i>
Poster 6	Approximation of Entangled Photon Pair Distribution in the SPDC Process <i>Máté Galambos Budapest University of Technology and Economics, Budapest, Hungary</i>
Poster 7	Attitude Determination on Board the HUNITY Satellite <i>Emil Viktor Hödl Budapest University of Technology and Economics, Budapest, Hungary</i>
Poster 8	C/N0 driven GNSS meteorology <i>Benedek Mihály Csala Budapest University of Technology and Economics, Budapest, Hungary</i>
Poster 9	Claim-First Reasoning and Conclusion-Driven Framing: An Argumentation-Theoretic Re-reading of the Challenger Pre-Launch Teleconference <i>János Tanács Eötvös Loránd University, Budapest, Hungary</i>
Poster 10	Designing an Affordable Geiger Counter Weather Balloon Payload <i>Flórián Balázs Vámosi Hungarian University of Agriculture and Life Sciences, Kaposvár, Hungary</i>
Poster 11	Engineering-Oriented Preliminary Design Framework for Regeneratively Cooled Liquid Rocket Thrust Chambers with Conjugate Heat Transfer Validation <i>András Hegedűs Department of Energy Engineering, Faculty of Mechanical Engineering, Budapest University of Technology and Economics, Budapest, Hungary</i>
Poster 12	From solar eruption to ionospheric storm: Tracking coronal mass ejections and their impact on HF propagation during solar cycle 25 <i>Elek Dániel Sántha Széchenyi István University Győr, Multidisciplinary Doctoral School of Engineering, Győr, Hungary</i>
Poster 13	GEN-1 Mission: Long-Duration Space Exposure of Multi-Species Plant Germplasm for Terrestrial and Space-Based Applications <i>Orsolya Meier Csillagváros Ltd., Budapest, Hungary</i>
Poster 14	Integrated Scaling Limits of Chamber Pressure in Regeneratively Cooled, Pressure-Fed Liquid Rocket Engines <i>Andras Hegedűs Budapest University of Technology and Economics, Budapest, Hungary</i>
Poster 15	Interannual variability of deliquescence probability on present-day Mars based on modelling results <i>Bernadett D. Pál HUN-REN CSFK Konkoly Observatory, Budapest, Hungary</i>
Poster 16	Investigation of inverted microstrip structure to increase performance of printed bandpass filters in the lower microwave bands. <i>László Baráth Budapest University of Technology and Economics, Budapest, Hungary</i>
Poster 17	Investigation of radiation immunity of semiconductor memories <i>Olivér Pintér Budapest University of Technology and Economics, Budapest, Hungary</i>
Poster 18	Kuvasz Rover Team: Building a Mars Rover With Limited Resources <i>Máté Boda Kuvasz Rover Team, Budapest, Hungary</i>
Poster 19	Laying the groundwork for enhanced agility of Project LEAP <i>Roland Reviczki Budapest University of Technology and Economics, Budapest, Hungary</i>
Poster 20	Low Cost Fibre Optic Gyroscope <i>Artúr László Balázs Budapest University of Technology and Economics, Budapest, Hungary</i>
Poster 21	LUNGISTRAT: a new open source web-based lunar ejecta thickness and layering calculator application <i>Richárd Tomka HUN-REN Research Centre for Astronomy and Earth Sciences, Budapest, Hungary</i>
Poster 22	Modular PocketQube Payload for Wideband Spectrum Monitoring <i>Márk Kovács University of Pannonia, Veszprém, Hungary</i>
Poster 23	Pressure-Dependent Performance Scaling and Selection Trends for Composite and Non-Composite Solid Propellants <i>András Hegedűs Budapest University of Technology and Economics, Budapest, Hungary</i>
Poster 24	Project LEAP - A student-developed satellite platform for Low-Earth Orbit <i>László Patrik Ábrók Budapest University of Technology and Economics, Budapest, Hungary</i>
Poster 25	Quantum State Tomography-Based Reconstruction in Noisy Q-OFDMA Communication Systems <i>Hussein Tuama University of Misan, Misan, Iraq; Department of Networked Systems and Services, Budapest University of Technology and Economics, Budapest, Hungary</i>
Poster 26	SZESAT 1 (1PQ) tein satellite on board HUNITY: autonomous subsystems and technology demonstrations in Earth orbit <i>Patrik Tóth Széchenyi István Egyetem, Győr, Hungary</i>
Poster 27	Testing ablation model on some brightest fireballs during 2024-2025 period by the allsky7 camera system maintained by Hungarian Meteoritical Society <i>Tibor Hegedűs Bajai Observatory of the University of Szeged, Baja, Hungary</i>

