

## H-SPACE 2024, April 25-26 - PROGRAM, as of April 17, 2024

<https://space.bme.hu>

### Day 1, April 25 (hybrid: presenters in person in Budapest, participants in person and online)

13:00 Onsite registration is open

14:00 Opening *Session chair: László Baczárdi*  
Hassan Charaf, dean, BME Faculty of Electrical Engineering and Informatics  
Orsolya Ferencz, Ministerial Commissioner for Space Research, Ministry of Foreign Affairs and Trade  
Kálmán Kovács, President, Hungarian Astronautical Society

14:15 Keynote 1 *tbc*

14:40 Keynote 2 Small satellites - Finnish road from education to science and business:  
Jaan Praks, Aalto University, Finland

15:05 Keynote 3 PocketQubes: A New Frontier in Space Education  
Caius Reza, Alba Orbital, Glasgow, United Kingdom

15:30 Poster highlight talks

16:00 Coffee break and poster session

16:45 Session Science and Technology 1 12 min talk + 3 min Q&A

*Session Chair: Lóránt Földváry, Budapest University of Technology and Economics*

Talk 1	53 Péter Vári	The future of satellite frequency usage satellite agenda items for WRC-23 and WRC-27
Talk 2	3 Ákos Kereszturi	Hungarian participation in the Comet Interceptor mission
Talk 3	4 Judit Fogasy	Radio interferometric observations of the JUICE spacecraft en route to Jupiter
Talk 4	10 Sara Sanchis Climent	SPECTRE, a self-deploying bi-stable composite tape-spring mechanism for future nanosatellite mission
Talk 5	32 Laura Bettioli	FOTEC's Testing and Qualification Capabilities for Small Satellites
Talk 6	43 Zoltán Tóth	Thermal performance characterization of battery insulation on ATL-1 picosatellite mission
Talk 7	44 András Pál	Fast and flexible developments of digital logics: applications in the first Hungarian astrophysical satellite, GRBA1ph
Talk 8	30 Máté Galambos	Testing remote clock synchronization with GPSDO-s and a free space laser communication system

18:45 Wrap up of the first day - by László Baczárdi

### Day 2, April 26 (full online, via Microsoft Teams)

9:00 Welcome of the second day

9:05 Highlight talk 28 Pál Gábor Vizi Hungarian participation in the European Space Agency's JUICE (Jupiter Icy Moons Explorer) mission

9:30 Session Science and Technology 2 12 min talk + 3 min Q&A

Talk 1	57 Árpád Kis	The Space Weather Monitoring and Data Service at HUN-REN Institute of Earth Physics and Space Science (EPSS)
Talk 2	54 Péter Pataki	Reproduction of the Lunar Radar experiment failure and success during implementation
Talk 3	15 Joel Eldo	Review of Lagrangian Points and Scope of Stationary Satellites
Talk 4	29 Mohammed Vaseeq	Space Debris: Overview and Mitigation Strategies
Talk 5	37 Vince Molnár	The Expected Impact of SysML v2 to Cooperation in the Space Sector
Talk 6	47 Tibor Hegedűs	EON: The first year of the re-started optical tracking of artificial satellites at Baja
Talk 7	48 Rhea Ranjit Mulki	Study of Microwave Electrothermal Propulsion System
Talk 8	8 András Illyés	Aether S, a Student-Developed Supersonic Sounding Rocket as a Carrier for Scientific Payload
Talk 9	2 Péter Farkas	Assessing Natural and Anthropogenic Ground Deformation Using Sentinel-1 PSI in the Region of Cluj-Napoca, Romania

12:00 Lunch break

13:15 Opening of the afternoon session

13:20 Invited talk Educational and incubation practices in the emerging space - an association perspective

István Arnócz, Hungarian Astronautical Society

13:40	Session Education and Outreach	12 min talk + 3 min Q&A
Talk 1	27 Don Koulaouzos	Assessment of Cooperation in the Space Sector
Talk 2	14 Jasminka Matevska	Engineering and Management of Space Systems (EMSS) - an International Joint Master's Double-Degree Programme
Talk 3	42 Annamária Komáror	Space Science in the Classroom
Talk 4	41 Bence Csaba Kováts	The educational and awareness-raising activities of BME Suborbital:
Talk 5	55 Szilárd Takács	Introduction of space science in higher education: space science in BSc engineering
15:00	Closing of the conference	

**Poster presentations**

Poster 1	6 Panta Sasikanth	Probing Low Mass Neutrinos in Gravitational Wave Environments: A Novel Approach with Feynman Diagrams & Applications In Space Science
Poster 2	7 András Mihály	Fast Routing in Entanglement-based Satellite Networks
Poster 3	9 Orsolya Meier	Circular food production in space environment – Insect protein production by supplementing green biomass in feed
Poster 4	11 Anna Fehér	Thermal properties of heterogeneous materials using extended heat equation:
Poster 5	12 Ákos Kereszturi	Spectral instrument optimization for asteroid missions by space weathering simulator
Poster 6	13 Bence Takács	RTK GNSS monitoring under high ionospheric activity
Poster 7	16 Máté Kreizinger	High-redshift radio quasars from ground and space
Poster 8	17 Kinga Tamási	Investigation of Glass-foam systems as Insulation materials for Space application:
Poster 9	18 Gergő Mezőhegyi	MAUVE – UV-Vis Spectroscopy of Stars by a 16U CubeSat
Poster 10	19 Kitti A. Berényi	Comprehensive analysis of the ionospheric response to the largest geomagnetic storms from solar cycle 24 over Europe
Poster 11	20 Hanga Katreiner	Proposal Of A Hybrid CSNN-PSO Algorithm For Improving Space Debris Identification And Classification
Poster 12	21 Pál Gábor Vizi	Transparent Planetary Polished Thin Section Rock Sample Maker for Hungarian Hunveyor Educational Space Probe
Poster 13	22 János Gaskó	Remote sensing of hydrological parameters by GNSS reflectometry
Poster 14	23 Richárd Krisztián Tó	Development of GIS software based spatial ejecta estimation algorithm to support the NASA-ESA Artemis program
Poster 15	24 Péter Püspöki	Distributed Intelligence and Sensor Network in the Power Systems of MRC-100 Satellite
Poster 16	25 Kitti A. Berényi	The Hungarian contribution to the T-FORS Horizon Europe project
Poster 17	26 László Csurgai-Horvá	Application of Rain Sensor Device in Reliable Attenuation Statistics Calculations on Satellite and Terrestrial Radio Connection
Poster 18	31 Máté Szarka	Simulating Solar Particle Events: New advances in Proton irradiation techniques for biological samples at ATOMK
Poster 19	33 Bence Csaba Kováts	Radiation characteristics measurement on a sounding rocket near the Kármán line
Poster 20	34 Bernhard Seifert	CubeSim - A Simulation Framework for small Satellites
Poster 21	36 Vilmos Steinmann	An event-based hydrological model for arid/hyper-arid and Martian environment:
Poster 22	38 Kitti Oláh	The role of entanglement in the development of satellite-based quantum internet
Poster 23	39 Ádám Dobay	Preliminary design of payload for sounding rockets
Poster 24	40 Gergely Márk Tölgye	Fuel consumption optimization for suborbital solid fuelled rocket engine:
Poster 25	45 Márton Kulcsár	Numerical investigation of the spanwise mean velocity gradient method for transition delay
Poster 26	46 Katherine Cazco	Radiocommunications with the International Space Station (ISS)
Poster 27	49 Anna Pántya	Class-Space: From the classroom to space!
Poster 28	50 Bence Kertész	The perspective of launch capacity and strategic sovereignty of European space activities
Poster 29	51 Tibor Hegedüs	Space Awareness: latest fireball events and the independent allsky7/8 network of Hungary
Poster 30	52 Benedikta Rédling	Data processing from weather satellites
Poster 31	56 Barnabás Zoltán Bar	The first module in space by SZESAT
Poster 32	58 Dóra Borbála Kovács	Daytime Optical Background Radiation