H-SPACE 2018

4th International Conference on Research, Technology and Education of Space

February 15-16, 2018
Budapest, Hungary

BME building 'I', Hall IB 026
Address: Magyar tudósok krt. 2., Budapest, H-1117, Hungary

Web: http://space.bme.hu/hspace2018

Conference Program

In this program, the affiliation of the first author is listed.

February 15, Thursday

14:00-14:20 Opening

János Józsa, Rector of Budapest University of Technology and Economics (BME)
András Pócza, Head of Department, Department for ICT Regulation and, Management Ministry of National Development
János Solymosi, President of Hungarian Astronautical Society

14:20- 15:20 Long talks, Section of Science and Technology I

Estimation of Clear Sky Level for Satellite Propagation Measurements
Bernard Adjei-Frimpong, László Csurgai-Horvath
Department of Broadband Infocommunications and Electromagnetic Theory, BME, Hungary

Participating in NASA-ESA Cassini Mission at Wigner RCP, former KFKI RMKI
Pál Gábor Vizi, Károly Szegő, Sándor Szalai, János Nagy
Wigner Research Centre for Physics, HAS, Hungary

Opportunities of 3D printing in the emerging field of Space Chemistry
Dorottya Milánkovich, Ferenc Darvas
Innostudio Inc. Hungary

15:20-15:40 One minute madness

Analyzing deformation above gas reservoir using multi-temporal InSAR
Bence Ambrus, Szabolcs Rózsa
Department of Geodesy and Surveying, BME, Hungary

Analyzing the Effects of Atmospheric Factors in Earth-space and Space-Earth Quantum Communication Channels
András Kiss, László Bacsárdi
Institute of Informatics and Economics, University of Sopron, Hungary

Citizen Science - An idea to integrate science into our digitized world
Peter Pusztai
Hungarian Astronautical Society, Hungary

Fifteen years in service for the society – the story of the Hungarian space web portal Űrvilág
Sándor Frey, László Bacsárdi
Űrvilág space portal, Hungary

Human Spaceflight: music effects in space confined environments
Luis Luque Alvarez
Széchenyi István University, Hungary

New methodologies for Big Data in space researches
Gergely Bencsik, Zoltán Pödör, László Bacsárdi
Institute of Informatics and Economics, University of Sopron, Hungary

Preparing a Lunar Rover Mission in the Framework of Analog Planetary Research
Koppány Juhász, Mátyás Hazadi, Tibor Pacher, Miklós Pathy
PuliSpace Technologies Ltd., Hungary

Recent trends in light pollution measured from space in Hungary
Kornél Kolláth, Kai Pong Tong, Zoltán Kolláth
Hungarian Meteorological Service, Hungary

Sensors of Swarm Stream as Technology Research on Nano Scale
Pál Gábor Vizi
Wigner Research Centre for Physics, HAS, Hungary

Sentinel-1 PSI Analysis of Greater Budapest Region
Péter Farkas, Gyula Grenerczy
Geo-Sentinel Ltd., Hungary

Simulation of different quantum error correction codes in free-space channels
Attila Iván, László Bacsárdi
Department of Networked Systems and Services, Hungary

Simulations of Single Event Effects in microelectronics caused by the lunar surface radiation environment
Dávid Lucsányi, Viktor Nagy, Vendel László, Miklós Pathy, Mátyás Hazadi
PuliSpace Technologies Ltd., Hungary

15:40-16:40: Poster session with coffee break

16:40-18:10: Technical presentations, Section of Science and Technology II

Optical transfer in space communication
Andrea Farkasvölgyi, István Frigyes
Department of Broadband Infocommunications and Electromagnetic Theory, BME, Hungary

Quantum Key Distribution in Space – A security review
Tamás Bisztray
Eötvös Loránd University, Hungary

Comparing Calculated and Measured Losses in QuESS's Quantum Channel
Máté Galambos, László Bacsárdi
Department of Networked Systems and Services, Hungary

Monitoring the movement of geodetic network in Thailand during 2013-2017 by GNSS
Nateepat Srivarom, Weng Jingnong, Serm Chinnarat
Beihang University, China

Tomographic Reconstruction of Atmospheric Water Vapour Using Simulated GNSS Data in Hungar
Yuxiang Yan, Wusheng Hu, Szabolcs Rózsa
Southeast University, China

Assessment of GNSS positioning under extreme weather conditions for safety-of-life application
Szabolcs Rózsa, Bence Ambrus, Ildikó Juni
Department of Geodesy and Surveying, BME, Hungary

February 16, 2018, Friday

9:30-9:40 Opening of the second day
László Jakab, Dean of Faculty of Electrical Engineering and Informatics, BME
László Bacsárdi, Secretary General of Hungarian Astronautical Society

9:40-10:10 Keynote speaker
New perspectives in the Russian-Hungarian space connections
János Lichtenberger, Csaba Ferencz
Eötvös Loránd University, Hungary

10:10-11:00 Technical presentations, Section of Science and Technology III

Validation tests for the recently upgraded Thermo-Vacuum Chamber in the Laboratory of the Space Dosimetry Research Group
Anna Baranyai, Balázs Zábori, Attila Hirn
Centre for Energy Research, HAS, Hungary

*Comparison of the predicted depressed sta*te of crew members with the results of their subjective psychological test at Concordia research station
Gábor Kiss, Klára Vicsi
Department of Telecommunications and Media Informatics, BME, Hungary

Activity of the ESA National Technology Transfer Office: Space technologies in everyday life
Zsuzsanna Tandi, Károly Szegő
Wigner Research Centre for Physics, HAS, Hungary

11:00- 11:20 Coffee break

11:20-12:35: Section of Education/Outreach

Expanding the Space of Space learning
Maria Messina, Giorgio Garagnani, Rosa Tagliamonte, Sabrina Ricci
Italian Space Agency, Italy

Hungarian Astro Pi experiments on the ISS
Florián Vámosi, Péter Pósa
Mihály Táncsics Grammar School of Kaposvár, Hungary

Solar Physics in the high school - Study of the sunspots
Mária Pető
Székely Mikó High School, Romania

ESERO Romania: Using Space as a Gateway to STEM
Virgiliu Pop
Romanian Space Agency, Romania

Filling the Gap in the ESA Space Technology Education
Levente Dudás, András Gschwindt
Department of Broadband Infocommunications and Electromagnetic Theory, BME, Hungary

12:35 Closing remarks
Kálmán Kovács, Director of Federated Innovation and Knowledge Centre, BME