



HBM SYSTEMS RESEARCH CENTRE, ÓBUDA UNIVERSITY

HAS200
4TH UNSATURATED SOIL, GRANULAR MATTER AND ENVIRONMENTAL ENGINEERING
SYMPOSIUM

IN MEMORY OF PROFESSOR G. N. PANDE

Online

organised by the Rejtő Sándor Faculty of Light Industry and Environmental Engineering & HBM Systems
Research Centre, Óbuda University, Budapest, Hungary;
The Department of Engineering Geology and Geotechnics, Civil Engineering, BME, Budapest, Hungary;
Wigner Physics Institute;

supported by the Hungarian National Committee of ISSMGE, ISSMGE TC106 and TC201, ON_DEM,
and the Hungarian Academy of Sciences

Participation after registration is free.

2026. Jan. 16.

TENTATIVE PROGRAM

The time is Central European Time (Budapest).

08:55 – 09:05 **Opening**

J. Józsa - Hungarian Academy of Sciences

Part 1 Unsaturated soils

09:05 – 09:15	K. Rajkai, chair, Introduction – HAS Agriculture Section and Soil Science Institute, guest in the last few decades of ISSMGE TC106, M. Datcheva, co-chair, Á. Bálint, co-chair.
09:15 – 09:50	F. Casini, J. Vaunat: A procedure for the direct determination of Bishop's parameter
09:50 – 10:25	E. Romero: Hydro-mechanical behaviour of compacted soils and rockfill across different scales
10:25 – 10:40	E. Imre, T. Firgi, G. Telekes, Á. Bálint et al: Grading entropy and Soil Water-Retention Curve (SWRC) of sand mixtures with fractal distribution. Validation of SWRC and permeability models.

Part 2 Geo-environment and in situ testing

10:40 – 10:45	J. Józsa : Introduction, K. Rajkai, chair, H. Bayoumi : co-chair, M. Datcheva, co-chair
10:45 – 11:00	M. Juhász: Szeged West and ELI, saline soils in patches and settlements
11:00 – 11:15	E. Imre et al.: Szeged - Ballina - finding post-depositional changes
11:15 – 11:25	Sz. Simon: Groundwater and surface salinisation
11:25 – 11:35	Á. Bálint et al.: Evaluation of atmospheric heavy metal deposition load in South-Western Hungary based on moss monitoring
11:35 – 11:45	H. Bayoumi: Organic matter and soil quality
11:45 – 12:00	E. Fenyvesi: Using Eötvös torsion balance. Signal or noise? Seismic and
12:00 – 13:00	Break (Discussions)

Part 3 to 4 Dikes, embankments, Math aspects, DEM, Physics

13:00 – 13:05	J. Józsa : Introduction, Á. Bálint, chair, M. Datcheva, co-chair, H. Bayoumi, co-chair
13:05 – 13:35	F. Casini: Hydromechanical behaviour of an embankment during inundation
13:35 – 13:50	E. Koch: Hungarian dike reports for TC201
13:50 – 14:05	Shuyin Feng: Hydraulic radius and hydraulic conductivity
14:05 – 14:30	D. Nagy: Selected theoretical topics. 1. Cavitation research & 2. Development of a GPU-based DEM solver for parameter optimisation in the simulations of soil-sweep tool interactions
14:30 – 14:40	A. Akate – D. Kabey – E. Imre – Á. Bálint et al.: Some notes on the Maths of global permeability relations of granular matter
14:40 – 14:55	I. Talata, T. Goda et al.: P&G 2005 conference papers.
14:55 – 15:10	Sz. Fodor: «Twice enough» algorithm
15:10 – 15:15	Break (Discussions)

Part 5 Granular matter, breakage

15:20 – 15:25	J. Józsa : Introduction, M. Datcheva, chair, Á. Bálint, co-chair
15:25 – 15:45	G. Guida, Italy: Laboratory Insights into Compressibility and Permeability of Granular Soils
15:45 – 16:05	M. Wang: An adaptive REV algorithm for multiscale modelling of granular materials undergoing large deformation
16:05 – 16:45	S. Pietruszczak: Modelling of hydro-mechanical response of rock mass containing a discrete fracture network
16:45 – 17:00	Closing (Discussion)

Note: the workshop will continue in June 2026, close to the ICSMGE event

Reserve

Á. Bálint et al.: Heat and Moisture Dynamics during Soil Drying under a Daily Solar Radiation Cycle Simulated by Infrared Lamps

A. Ürmös, P. Felker, M. Gula, Zs. Hortobágyi: EGRWSE 2024 to 2028, EE 31th Energy and Environment

Salman Brbhan: Soil Thermal Conductivity Enhancement as a Key Factor in Geothermal Heat Pump Performance
T. Goda & D. Edlmann : Modelling folks with DEM

Registration : <https://forms.gle/PFy1CX7px2GVCDYHA>

Teams link : https://teams.microsoft.com/l/meetup-join/19%3aFHHdT3YgTbUZb79Pg_bdTfKZmcp8scufpDt3KR1QP_M1%40thread.tacv2/1767686568797?context=%7b%22id%22%3a%221d6a56fa-705a-4bbc-8004-67a21d5e9b97%22%2c%22oid%22%3a%22f4ad040e-f193-4400-b776-a32473cf7510%22%7d



Past events supported by ISSMGE and the Soil Science Institute in Hungary

1. 1st Unsaturated Soil Symposium- 1999. BME, Budapest, Hungary
2. 2nd Unsaturated Soil Symposium- 2003. 2-5 of November. Ráckeve, Hungary
3. 3rd Unsaturated Soil Symposium, May 5, 2015. RISSAC, Budapest, Hungary
4. 1st Middle European Conference on Landfill Technology 2008, at the Hungarian Academy of Science, Budapest, Hungary
5. The Granular Matter Section JETC 2017, BME, Budapest, Hungary
6. June 12, 2018. Workshop on Granular Matter at the Hungarian Academy of Sciences
7. Workshop series on ISC6 – September 2021, Hungarian Academy of Science
8. Workshop on Granular Matter, Hungarian Academy of Science, 2023. 24-25th August

