

Academia Europaea – HUN-REN

INTERDISCIPLINARY WORKSHOP ON EARTH, ENVIRONMENT AND HEALTHY LIVING

24-25 April, 2025 | Budapest, HUN-REN HQ

HUN-REN
Hungarian Research Network



sponsored by HUN-REN and Academia Europaea Budapest Hub

Conveners:

Sierd Cloetingh (HUN-REN EPSS, UU)

Katalin Solymosi (AE Budapest Hub, YAE, ELTE)

RATIONALE AND SCOPE

A close connection exists between Earth system dynamics, Earth environment and quality of the human habitat. The latter includes access of an increasing world population to fresh water, sustainable energy and food amid climate change and various anthropogenic pollutions. All these aspects are of paramount importance for healthy living.

This workshop brings together leading scientists, experts and stakeholders engaged in facing these issues with different complementary backgrounds. The aim is to intensify the dialogue between Earth and environmental sciences and life sciences, establishing novel interdisciplinary connections, creating a platform to promote frontier research and innovation to address urgent societal needs. These issues are by definition of global and pan-European nature, but also particularly relevant for the Danube basin and the Danube river system.

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24th April 2025

- 9.00 **Balázs Gulyás**
Opening and welcome
- 9.20 **Katalin Solymosi**
Introduction of the AE Budapest HUB and SAPEA
- 9.40 **Sierd Cloetingh**
Introduction to the workshop

10.00–10.30 **COFFEE BREAK**

SESSION I: EARTH SYSTEM AND ENVIRONMENT

- 10.30 **Sierd Cloetingh (HUN-REN EPSS, Sopron; Utrecht University)**
Coupled Surface to Deep Earth Processes: Perspectives from TOPO-EUROPE with an Emphasis on Climate- and Energy-Related Societal Challenges
- 11.00 **Taras Gerya (ETH Zürich)**
Bio-Geodynamics
- 11.30 **Reinhard Hüttl (EEI Eco-Environment Innovation GmbH, Berlin)**
Soil Sciences and the Nantesbuch Initiative
- 12.00 **Pietro Sternai (University of Milano)**
The Interplay Between Geology and Climate: The Slow Breath of Earth's Living Machine
- 12.30 **Laura Petrescu (NIEP Bucharest)**
Unconventional Earthquakes: Peeking Inside the Vrancea Seismicity

13.00–14.00 **LUNCH BREAK**

SESSION II: RENEWABLE GEO-ENERGY

- 14.00 **Gábor Tari (OMV, Vienna)**
Natural Hydrogen: Where do we stand?
- 14.30 **Eszter Békési (HUN-REN EPSS, Sopron)**
Geo-Energy Research at HUN-REN EPSS: Status and Future Advancements
- 15.00 **Bernhard Novotny (OMV, Vienna)**
Deep Geothermal Energy for Decarbonizing the City of Vienna

15.30–16.00 **TEA BREAK**

- 16.00 **János Szanyi (University of Szeged)**
Geothermal Energy Utilization
- 16.30 **Mark van der Meijde (University of Twente, Enschede)**
Geothermal Energy from Large and Hot to Local and Cool Systems: Concepts and Options for Monitoring
- 17.00 **Márta Berkesi (HUN-REN EPSS, Sopron)**
CO₂-rich Fluids from Greater Depth: Connection of Deep Earth with the Human Habitat
- 17.30 Challenges and Opportunities

17.45 **DRINKS**

Day 2, 25th April 2025
LIFE SCIENCES AND HEALTHY LIVING

SESSION III: FEEDING HUMANKIND AND HEALTHY LIVING

- 9.00** **Tom Beer (Safe System Solutions Pty Ltd, Brunswick)**
Climate, Wildfires, Air Quality and Health
- 9.30** **Katalin Solymosi (ELTE Eötvös Loránd University, Budapest)**
Challenges of Sustainable Agriculture
- 10.00** **Phoebe Koundouri (Athens University of Economics and Business)**
Integrated Assessment Models for Transforming Food Systems under
Climate, Biodiversity and Food Security Threats: A Systems Approach
- 10.30** **Péter Török (University of Debrecen)**
Grassland Restoration in the Anthropocene: Challenges and
Opportunities for a Sustainable Future
- 11.00–11.30** **COFFEE BREAK**
- 11.30** **Péter Nagy (Hungarian National Institute of Oncology, Budapest)**
European Initiatives to Improve the Integration of Cancer Research,
Prevention and Care
- 12.00** **Balázs Gulyás (HUN-REN HQ, Budapest)**
Frontiers of Healthy Ageing
- 12.30** **Péter Hegyi (Semmelweis University, Budapest)**
From Science to Sustainable Health: Transforming Education and
Research into Real-World Impact
- 13.00** Challenges and Opportunities
- 13.15** Future Initiatives and Follow-up
- 13.30–15.00** **LUNCH BREAK**

HOST

Balázs Gulyás, President HUN-REN (gulyas.balazs@hun-ren.hu)

SCIENTIFIC ORGANIZING COMMITTEE

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