



AUGUST 26-28, 2025
EUROPE
MISKOLC, HUNGARY

Scientific Program

2025. 08. 26. (TUESDAY)

Plenary lectures – Session chair: Árpád B. Palotás

Note takers: Danae Gibson, Indira Wade, Amari DeSouza (14:00 – 14:30 and 16:30 – 17:00)

Note takers: Noah Francis, Sarah Tinord, Jada Taylor (14:30 – 15:00)

Note takers: Anna Maning, Thandi Kirk, Sydney Beeker (15:00 – 15:30)

Note takers: Rosemary Rosales, Jasmin Engel, Carah Hayes, Dimas Santiago (16:00 – 16:30)

Supervisors: Pauline Colton, Natalie Rose, Joel Blount, Veera Badisa

Venue: Lecture Hall Miskolc

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| 14:00 – 14:30 | Victor Ibeanusi, dean – Zita Horváth, rector – Árpád B Palotás, dean
Greetings on behalf of FAMU and the University of Miskolc, |
| 14:30 – 15:00 | Tamás Szolnok, CEO, Agrogeo Ltd.
From Energy Industry to Agriculture: The Path of Lignite Toward Sustainability |
| 15:00 – 15:30 | Péter Györkös, CEO, Metal Waste Solutions
Waste management optimums -in reverse value chain engineering |
| 15:30 – 16:00 | coffee break |
| 16:00 – 16:30 | Balázs Órfi, Wanhua-BorsodChem, Director of Operation
Water management in the Wanhua-BC for sustainability |
| 16:30 – 17:00 | Li Fadong, professor, University of Chinese Academy of Sciences
Long-term observation for Energy-Water-Food-Climate Nexus in China. |
| 18:00 – 21:00 | Gala Dinner and Award ceremony
University canteen |



FLORIDA
AGRICULTURAL AND
MECHANICAL
UNIVERSITY



2025. 08. 27. (WEDNESDAY)

Circular Economy – Session chair: Csaba Deák

Note takers: Danae Gibson, Indira Wade, Amari DeSouza, Anna Maning, Thandi Kirk, Sydney Beeker (9:00 – 11:00)

Note takers: Noah Francis, Sarah Tinord, Jada Taylor, Rosemary Rosales, Jasmin Engel, Carah Hayes, Dimas Santiago (11:00 – 12:15)

Supervisors: Pauline Colton, Natalie Rose, Joel Blount, Veera Badisa

Venue: Lecture Hall Miskolc

9:00 – 9:25	Hidayanto, Aryo Synthesis & Profiling Sodium Mordenite Templated Carbon [Na-MOR/C] & Potassium Merlinoite [K-MER] Frameworks for Hydrogen Physisorbent
9:25 – 9:50	Mkhize, Mbali, Sishi, Zama Strategic Partnerships for Sustainability: Enhancing the Capacity of Historically Disadvantaged Institutions in the Energy-Water-Food-Climate Nexus through the MUT-FAMU Collaboration
9:50 – 10:15	Hlongwane, Mandla Victor Reorienting Innovation for Inclusive Economic Growth in South Africa: Achieving the Sustainable Development Goal
10:15 – 10:40	Mothoa, Melvin Shello Green entrepreneurship in the circular economy: Unlocking opportunities for Small-Medium enterprises in driving sustainable innovation
10:40 – 11:00	Coffee break
11:00 – 11:25	Szederkényi, Zita Circularity in Business
11:25 – 11:50	Berényi, László Personal issues about circularity: approach to energy saving
11:50 – 12:15	Ngubane, Xolile Veronica The role of entrepreneurship in the development of the circular economy in KwaZulu-Natal, South Africa
12:00 13:30	Lunch <u>University canteen</u>



2025. 08. 27. (WEDNESDAY) – CONT'D

Water Management – Session chair: Balázs Kovács

Note takers: Noah Francis, Sarah Tinord, Jada Taylor, Rosemary Rosales, Jasmin Engel, Carah Hayes, Dimas Santiago (9:00 – 11:00)

Note takers: Danae Gibson, Indira Wade, Amari DeSouza, Anna Maning, Thandi Kirk, Sydney Beeker (11:00 – 12:00)

Supervisors: Pauline Colton, Natalie Rose, Joel Blount, Veera Badisa

Venue: Lecture Hall Bosch

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| 9:00 – 9:25 | Trebelsi, Sirene
Cement Kiln Dust use in Environmental Remediation: A Review of Applications |
| 9:25 – 9:50 | Miklós, Tímea
Immobilization of TiO ₂ /CNT composites in the material and surface of PVDF membranes used for the treatment of oily wastewater |
| 9:50 – 10:15 | Makhathini, Thobeka
Development of an Integrated Urban Water System to Mitigate Climate Change Impacts in Local Communities |
| 10:15 – 10:40 | Mohammed Hamdy Eid, Hemida
Integrated Assessment of Groundwater Salinity Sources and Inter-Aquifer Mixing Dynamics in Siwa Oasis, Egypt: A Multi-Method Approach Using Self-Organizing Maps, Isotopic Tracers, and Numerical Modeling |
| 10:40 – 11:00 | Coffee break |
| 11:00 – 11:25 | Nusser, Gyöngyvér Boglárka
The edibility of microgreens grown on greywater |
| 11:25 – 11:50 | |
| 12:00 13:30 | Lunch
<u>University canteen</u> |



2025. 08. 27. (WEDNESDAY) – CONT'D

Energy – Session chair: Helga Kovács

Note takers: Danae Gibson, Indira Wade, Amari DeSouza, Anna Maning, Thandi Kirk, Sydney Beeker (14:00 – 16:00)

Note takers: Noah Francis, Sarah Tinord, Jada Taylor, Rosemary Rosales, Jasmin Engel, Carah Hayes, Dimas Santiago (16:00 – 18:00)

Supervisors: Pauline Colton, Natalie Rose, Joel Blount, Veera Badisa

Venue: Lecture Hall Miskolc

- 14:00 – 14:25 **Ritgasszer, Tamás**
Heat conduction in a rotating body - on the example of a bicycle disc brake
- 14:25 – 14:50 **Truong, Dinh Phi**
Recovery Potential of Noble Metals and Rare Earth Elements from Biomass Combustion Residues
- 14:50 – 15:15 **Kiss, Balázs Péter**
Investigation of carbon dioxide conversion via microwave plasma and its characterization
- 15:15 – 15:40 **Bereczky, Ákos**
Hydrogen utilisation potential and experience in conventional thermal power plants
- 15:40 – 16:00 Coffee break
- 16:00 – 16:25 **Papp, Dániel**
Hydrogen-assisted combustion in a lean premixed natural gas swirl burner
- 16:25 – 16:50 **Kádár, József**
From Nexus Thinking to Action: Renewable Energy for Regional Cooperation and Climate Resilience
- 16:50 – 17:15 **Nagy, Gábor**
Biogas upgrading with aquatic plants
- 17:15 – 17:40 **Brbham, Salman**
An experimental study to improve Geothermal Heat pump efficiency by testing improved soil mixture.
- 18:30 – 22:00 **Vine tasting in Tokaj**
Travel by bus



2025. 08. 27. (WEDNESDAY) – CONT'D

Climate, Waste and Agriculture – Session chairs: Klaus Maas and Sándor Nagy

Note takers: Noah Francis, Sarah Tinord, Jada Taylor, Rosemary Rosales, Jasmin Engel, Carah Hayes, Dimas Santiago (14:00 – 16:00)

Note takers: Danae Gibson, Indira Wade, Amari DeSouza, Anna Maning, Thandi Kirk, Sydney Beeker (16:00 – 18:00)

Supervisors: Pauline Colton, Natalie Rose, Joel Blount, Veera Badisa

Venue: Lecture Hall Bosch

- 14:00 – 14:25 **Mkhize, Xolile**
Recent Food Innovations and Food Systems Transformation in South Africa: Feeding the Future Initiatives
- 14:25 – 14:50 **Nkonki-Mandleni, Busisiwe**
Co-design circles as vehicle for climate change adaptation
- 14:50 – 15:15 **Eteraf, Hasan**
An Advanced Approach Integrating Methods to Estimate Hydraulic Conductivity of 1 Different Soil Types Supported by a Machine Learning Model
- 15:15 – 15:40 **Martinez-Colón, Michael**
Spatial and Temporal Changes on the Fate and Bioavailability of Selenium – Is this Medical Geology?
- 15:40 – 16:00 Coffee break
- 16:00 – 16:25 **Havas, Attila**
The role of foresight in goal-oriented transformative change processes
- 16:25 – 16:50 **Dobó, Zsolt**
Development of high-resolution PM measurement network in Miskolc and Kaposvár, Hungary
- 16:50 – 17:15 **Bokányi, Ljudmilla**
Innovative approach in sewage sludge treatment towards soil sustainability
- 17:15 – 17:40 **Géber, Róbert**
Artificial aggregates- an alternative way to substitute primary raw materials for road construction
- 18:30 – 22:00 **Vine tasting in Tokaj**
Travel by bus



2025. 08. 28. (THURSDAY)

Plenary lectures – Session chair: Csaba Deák

Note takers: Veera Badisa, Natalie Rose (9:00 – 11:00)

Note takers: Pauline Colton, Joel Blount (11:00 – 12:00)

Note takers: Dimas Santiago, Veera Badisa (12:00 – 12:30)

Venue: Lecture Hall Miskolc

9:00 – 10:00	Nokuthula, Sibiya Empowering Women for Climate Leadership: A New Initiative for Africa
10:00 – 10:30	Coffee break
10:30 – 11:00	Palotás, Árpád B. Introduction to the University of Miskolc and its activities
11:00 – 11:30	Ibeanusi, Victor – Chen, Gang – Sisco, Josh – Adesegun, Nokware The Nexus Science Dashboard and about the Nexus Science Enterprise
11:30 – 12:00	Maas, Klaus – Gilgen, David The Graduate School NRW – Motivation for Founding and Initial Experiences
12:00 – 12:30	Fierros Romero, Grisel Microbial Bioagents at the Water-Soil Nexus: Bioremediation Strategies for Sustainable Resource Management in Mexico
12:45 – 14:00	Lunch, Departure

