

Interdisciplinary Research on Elements of Agricultural Environment

Institute of Agrophysics, Polish Academy of Sciences | Doświadczalna 4, Lublin

03	28	01
KEYNOTE LECTURES	SCIENTIFIC TALKS	DAY IN LUBLIN

PROGRAMME OUTLINE

08:30–09:00	Registration
09:00–09:10	Opening · Dr hab. Artur Nosalewicz, prof. IA PAS *Head of the Interdisciplinary Doctoral School of Agricultural Sciences*
09:10–09:20	Dr Anna Sobocińska · Special Presentation | Polish Academy of Sciences
09:20–11:25	**SESSION I · Soil Physics, Hydrology & Biogeochemical Processes**
11:25–11:40	Coffee break and networking
11:40–13:00	**SESSION II · Agroecosystems, Plant Science & Biobased Materials**
13:00–13:45	Lunch and networking
13:45–15:00	**SESSION II · Continued after lunch**
15:00–15:15	Coffee break and networking
15:15–17:50	**SESSION III · Soil and Plant Health & Environmental Applications**
17:50–18:00	Final discussion and closing remarks

THREE INVITED KEYNOTE SPEAKERS

09:20 · KEYNOTE SPEAKER

Dr Tsvetina Ilieva-Paparkova

Structural and Hydrological Properties of Epicalcic Chernozems Under Different Land Use

11:40 · KEYNOTE SPEAKER

Dr Víctor Rolo

The Dehesa: Threats and Opportunities for a Mediterranean Silvopastoral System Paradigm

15:15 · KEYNOTE SPEAKER

Dr María Vivas

The Relevance of the Microbiota as an Early Marker of Tree and Soil Health for a Sustainable Management of the Dehesa System

Organisers Institute of Agrophysics, PAS · Polish Academy of Sciences, Lublin Branch
www.mlodzibadacze.edu.pl · Detailed schedule on the following pages

Co-organisers: Doctoral School of Quantitative and Natural Sciences; Interdisciplinary Doctoral School of Agricultural Sciences.

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SESSION I / 09:20–11:25

Soil Physics, Hydrology & Biogeochemical Processes

8 presentations · Keynote lecture at 09:20

08:30–09:00	**Registration and welcome coffee**
09:00–09:10	**Opening · Dr hab. Artur Nosalewicz, prof. IA PAS** *Head of the Interdisciplinary Doctoral School of Agricultural Sciences*
09:10–09:20	**Dr Anna Sobocińska · Sponsor talk MOST PAN - International Cooperation Department, Polish Academy of Sciences**
09:20–09:40	**Dr Tsvetina Nikolaeva Ilieva-Paparkova** KEYNOTE LECTURE "Nikola Poushkarov" - Agricultural Academy, Bulgaria *Structural and Hydrological Properties of Epicalcic Chernozems Under Different Land Use*
09:40–09:55	**Monica Shree Chandramohan** Institute of Hydrology, Slovak Academy of Sciences, Slovakia *Influence of Biochar Type and Application Rate on Wettability and Hydraulic Conductivity of Sandy Soil*
09:55–10:10	**Maciej Kozyra** Institute of Agrophysics, PAS, Poland *An axis-translation experimental platform for investigating hysteresis of unsaturated hydraulic conductivity*
10:10–10:25	**Rafał Pelczar** Institute of Agrophysics, PAS, Poland *Determination of the quantity characterising the susceptibility of soils to splash erosion - doctoral thesis concept*
10:25–10:40	**Rafael Navas** Polytechnic University of Madrid, Spain *Tracking water losses from paddy fields using chemical mass balance and digital filtering*
10:40–10:55	**Tianjing Ren** Institute of Soil Science and Plant Cultivation – State Research Institute (IUNG-PIB), Poland *Cold- and hot-water-extractable carbon as complementary indicators for soil organic carbon monitoring in cropland profiles*
10:55–11:10	**Adrianna Rafalska** Institute of Agrophysics, PAS, Poland *Methane oxidation potential in grassland soils – preliminary results of a laboratory experiment*
11:10–11:25	**Adam Furtak** Institute of Agrophysics, PAS, Poland *Aerobic metabolism of organophosphonates as an environmental source of methane*
11:25–11:40	**Coffee break and networking**

SESSION II / 11:40–15:00

Agroecosystems, Plant Science & Biobased Materials

10 presentations · Keynote lecture at 11:40 · Lunch break at 13:00

11:40–12:00	**Dr Víctor Rolo** KEYNOTE LECTURE University of Extremadura, Spain *The Dehesa: Threats and Opportunities for a Mediterranean Silvopastoral System Paradigm*
12:00–12:15	**Riccardo Picone** University of Florence, Italy *Fava bean-winter wheat intercropping promotes the yield intensification and the ecosystem service provision under zero-N conditions*
12:15–12:30	**María Guillem-Bernal** Polytechnic University of Madrid, Spain *Mediator Recruitment Defines ARF Activation*
12:30–12:45	**Diksha Kumari** Institute of Plant Protection – National Research Institute, Poland *Role of ABA in Modulating PVY Infection and Aphid Vector Interactions in Tomato*
12:45–13:00	**Paweł Zalewski** Institute of Plant Protection – National Research Institute, Poland *Effects of viral suppressor of post-transcriptional gene silencing on three-way virus-aphid-tomato interactions. Role of 2b CMV in modification of insect vector behaviour*
13:00–13:45	**Lunch and networking**

SESSION II / CONTINUED AFTER LUNCH

13:45–14:00	**Priyal Sisodia** Institute of Agrophysics, PAS, Poland *Soil bacterial communities under wheat monocropping and intercropping across contrasting production systems*
14:00–14:15	**Mahdi Shahabirokni** Christian-Albrechts University of Kiel, Germany *From Halophytes to Wheat: Beyond Classical PGP Traits toward Ecologically Adapted Microbial Consortia*
14:15–14:30	**Aleksandra Nycz** Institute of Agrophysics, PAS, Poland *Biochar in Insect Rearing: Opportunities and Limitations*
14:30–14:45	**Sainul Abidh Kalappurackal Muhammadaly** Institute of Agrophysics, PAS, Poland *Interplay of pH and distinct post-harvest storage conditions in shaping the structural and rheological properties of apple-derived pectin fractions*
14:45–15:00	**Nada Bougriou** Institute of Agrophysics, PAS, Poland *Exploring The Diversity of Algerian Carob: Properties and Food Applications*
15:00–15:15	**Coffee break with light refreshments and networking**

SESSION III / 15:15–17:50

Soil and Plant Health, Environmental Applications & Interdisciplinary Methods

10 presentations · Keynote lecture at 15:15 · 2 online presentations
Join the ZOOM meeting https://zoom.us/j/93173292888?pwd=H7uXt8mwCoKkIjOrBFTrfbN7HKO94y.1

15:15–15:35	**Dr María Vivas** KEYNOTE LECTURE University of Extremadura, Spain *The Relevance of the Microbiota as an Early Marker of Tree and Soil Health for a Sustainable Management of the Dehesa System*
15:35–15:50	**Siyu Mei** University of Groningen, The Netherlands *Insights into diversity versus compositional effects of pesticide mixtures on soil microbial functions and community dynamics*
15:50–16:05	**Daria Barańska** Institute of Agrophysics, PAS, Poland *Impact of Seed Inoculation on the Bacterial Community Structure of Coriander Microgreens Revealed by NGS*
16:05–16:20	**Giulia Paolella** University of Naples Federico II, Italy *Wastewater-derived Organic Matter and Bisphenol A Complexation: Implications for Agricultural Water Reuse*
16:20–16:35	**Elis-Bright Molua** Institute of Agrophysics, PAS, Poland *Cadmium Adsorption in Aqueous Solution Using Biochar and Activated Carbons Derived from Hermetia illucens*
16:35–16:50	**Desmond Kwayela Sama** Institute of Agrophysics, PAS, Poland *Ecotoxicological Assessment of NH3(aq)-modified Biochar: Effects on Early Seedling Development and Ostracods Growth*
16:50–17:05	**Karol Licznar** Institute of Soil Science and Plant Cultivation (IUNG), Poland *From Plant Seeds to Painting Binders: Chemical Composition and Modern Analytical Approaches*
17:05–17:20	**Agnieszka Lenga** Institute of Agrophysics, PAS, Poland *Identification and comparative analysis of hydrophobin candidates diversity in three entomopathogenic Akanthomyces strains*
17:20–17:35	**Samuel Apuri** ONLINE Polytechnic University of Cartagena, Spain *Postharvest performance, storage grain quality, and postharvest losses of pearl millet (Pennisetum glaucum) and sorghum (Sorghum bicolor) in semi-arid Ghana: Influence of farmer practices, moisture status, storage insect pest, and storage systems.*
17:35–17:50	**Jakub Hampejs** ONLINE Czech University of Life Sciences Prague, Czech Republic *Mathematical Models for Forecasting Photovoltaic Power Production*
17:50–18:00	**Final discussion and closing remarks · Dr hab. Artur Nosalewicz, prof. IA PAS** *Before we meet again. Will AI change the way we do research?*