



2025

PROGRAM

6TH INTERNATIONAL MULTIDISCIPLINARY
CONFERENCE FOR YOUNG RESEARCHERS

*"Science and Innovation: Advancing
the Path to a Sustainable Future"*

9-10 October 2025
Prague, Czech Republic



Welcome to the 6TH MCYR - Multidisciplinary Conference for Young Researchers

Hosted by:

The Czech University of Life Sciences Prague

Word from our Dean

Dear colleagues, Ladies and gentlemen, esteemed guests, and fellow scholars, and especially Early Career Researchers, I am truly honoured to have you here as we gather for the 6th Multidisciplinary Conference for Young Researchers, organized by the BioResources and Technology (BRT) at the Faculty of Tropical AgriSciences (FTZ), Czech University of Life Sciences Prague (CZU). This conference represents not only an important milestone in the academic calendar but also a celebration of the potential, innovation, and ambition that young researchers bring to the forefront of our academic community.

The Multidisciplinary Conference for Young Researchers, or MCYR as we fondly refer to this event, embodies the spirit of collaboration, exploration, and intellectual growth. It is a testament to the belief that, regardless of our individual fields of study, when we come together and share our diverse perspectives and knowledge, we can spark new ideas and breakthroughs that have the power to change the world.

***„Early Career Researchers are the driving force of tomorrow's
knowledge landscape, their innovative thinking and
unwavering curiosity shaping a brighter and more informed
future for all...”***

Assoc. Prof. Dr. Hynek Roubík

This year's MCYR, hosted in the heart of our beautiful and historic city of Prague, is particularly special. It serves as a reminder that knowledge knows no borders. It transcends geographical and disciplinary boundaries, and it is a unifying force that binds us together. Here in this vibrant and dynamic city, we are afforded the opportunity to not only engage in the exchange of ideas but also to immerse ourselves in the rich tapestry of history, culture, and academia that Prague has to offer.

As you go through this conference, you will witness an array of presentations and discussions covering a wide spectrum of disciplines. From agriculture and engineering to economics and environmental sciences, this conference is a testament to the multidisciplinary nature of modern research. I hope it will be for you a platform where ideas merge, and new collaborations are born.

Early Career Researchers - you are the driving force behind the progress we seek to achieve. Your fresh perspectives, innovative methodologies, and unwavering dedication are the seeds of transformative change. Through your work, you are contributing to the greater body of human knowledge and helping to address some of the most pressing challenges facing our world today.

I encourage each and every one of you to make the most of this unique opportunity. Engage with your peers, ask questions, challenge assumptions, and embrace the diverse array of ideas that will be presented here. Remember that this conference is not just about presenting your research; it's about the conversations, the connections, and the collaborative spirit that you will carry forward in your academic and professional journeys.

Sincerely on behalf of the Scientific Committee of MCYR,

Assoc. Prof. Dr. Hynek Roubík

Dean of the Faculty of Tropical AgriSciences

Director of BioResources and Technology Division

Czech University of Life Sciences Prague

roubik@ftz.czu.cz



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General guidelines and practical information

How to get to CZU

From the city centre: Take Metro Line A to Dejvická station. From Dejvická, take Bus 107 (direction Suchbát) or Bus 147 (direction Výhledy) and exit at “Zemědělská univerzita” stop. The main CZU entrance gate is directly across the street.

Parking: Visitors may park on the CZU campus. Enter through the main gate, marked “University Guests” and follow on-site signs.

Conference Format and Venue

The 6th International Multidisciplinary Conference for Young Researchers (MCYR 2025) will be held as a **hybrid event**, allowing participants to join either in person or online.

Location: The main programme will take place at the Faculty of Tropical AgriSciences.

Venue: Faculty of Tropical AgriSciences, Czech University of Life Sciences Prague, Kamýcká 126, Prague, Czech Republic.

Directions: Download the campus map to find directions to the conference venue here. Alternatively, search “**BioResources & Technology**” on Google Maps to get directions.

Virtual Session: Microsoft Teams will be used for virtual presentations.

On-site Navigation

Key conference areas inside the Faculty of Tropical AgriSciences building:

- Atrium & Bistro & Room 116: 1st floor
- Rooms 313 & 315: 3rd floor
- Room 401: 4th floor

Wi-Fi Access: Free Wi-Fi is available throughout the CZU campus via the **CZU Guest** network.

- **Username:** 6884
- **Password:** 980EW200

MCYR 2025 Storytelling Competition

Your Research · Your Story · Your Impact

All accepted MCYR 2025 presenters attending the conference in person are invited to join the Storytelling Competition, a chance to transform your abstract into a compelling 500–800 word narrative that connects your research to wider society.

Your story should highlight the broader relevance of your work and relate it to one of four European projects: OSIRIS, COMUNIDAD, BIO-CAPITAL, or AgriSci-UA, covering themes such as reproducibility, satellite-supported agriculture, biodiversity financing, and agri-tech innovation.

Competition Topics

- OSIRIS – Open Science and Research Integrity: advancing transparency, reproducibility, and trust in science.
- COMUNIDAD – Geospatial Intelligence for Community Resilience: using satellite data, AI, and mapping tools for climate and environmental challenges.
- BIO-CAPITAL – Innovative Monitoring and Financing of Biodiversity: leveraging space-based technologies to value and conserve biodiversity.
- AgriSci-UA – Applied Agri-Tech Innovation: supporting early-stage technologies for sustainable agriculture.

Four winners, one for each theme, will receive:

- an official certificate,
- their story featured on all partner websites,
- a cash prize and gift bag, and
- on-stage recognition during the MCYR 2025 Opening Session.

Winners will be announced and awarded during the Opening Ceremony, so don't miss the opportunity to share your research story with the MCYR community.

Presentation guidelines

Oral Presentation: All accepted oral presentations are limited to 10 minutes of presentation time, followed by a Q&A session of 5 minutes.

Prepare your presentation in the [MCYR PowerPoint Template](#) and submit it via e-mail at mcyr.info@gmail.com.

Poster Presentation: Posters should be in portrait orientation with dimensions of DIN A0 (841mm x 1189mm) or DIN A0 Oversize (882mm x 1247mm). Please use the [MCYR Poster Template](#). You are responsible for printing your poster.

Presenters must be in front of their poster during their in-person session and provide a brief introduction (maximum 5 minutes) outlining the main message.

Online poster presentations: Prepare your poster as a single PDF using the [MCYR Poster Template](#) and be ready to give a live introduction (maximum 5 minutes) during the online poster session. Submit your PDF via e-mail at mcyr.info@gmail.com.

Virtual Session: During the conference, there will be a virtual oral and poster session. You will be assigned a specific time slot to present your presentation and interact with attendees. Microsoft Teams will be used for virtual presentations. Please ensure you have access and are familiar with the platform.

We look forward to your contribution and hope to see you at the 2024 MCYR Conference!

Best Presenter Award

Outstanding contributions will be recognised with the Best Presenter Award in each oral and poster session. Session chairs will select the winners based on the clarity of presentation, the quality of visuals, and audience engagement. All awards will be presented during the Wrap-Up Session, closing the conference with a celebration of excellence.

Link to virtual sessions:

MCYR 2025 - Opening, Keynote, Room 401

Microsoft Teams, meeting ID: 393 050 999 898, access code: JN7TA7j9

MCYR 2025 - PARALLEL SESSION ROOM 313

Microsoft Teams, meeting ID: 327 224 867 510 4, access code: nL7Kf6H6

MCYR 2025 - PARALLEL SESSION ROOM 315

Microsoft Teams, meeting ID: 337 440 507 375 8, access code: T6PY2GQ3

Book of Abstracts

The MCYR 2025 Book of Abstracts presents the research and ideas shared by early-career scholars participating in the conference. It offers a concise overview of the studies featured during the sessions and highlights opportunities for further collaboration.

A preliminary version of the Book of Abstracts can be accessed online using the QR code below.



The final version, including only the presented contributions, will be available for download through the MCYR website after the conference.

Program

Thursday, 9.10.2025

Location

9:00-10:00	Registration	Atrium
10:00-11:00	Opening Ceremony, Keynote Speech, Group Photo	Room 116
11:00-12:00	Parallel Session: Plants & Agriculture (I)	Room 315
	Parallel Session: Technology & Innovation (I)	Room 313
12:00-13:00	Lunch Break	Atrium
13:00-15:30	Parallel Session: Plants & Agriculture (II)	Room 315
	Parallel Session: Technology & Innovation (II)	Room 313
	Parallel Session: Society & Culture (I)	Room 401
15:30-16:00	Coffee Break	Atrium
16:00-18:30	Parallel Session: Plants & Agriculture (III)	Room 315
	Parallel Session: Technology & Innovation (III)	Room 313
	Parallel Session: Society & Culture (II)	Room 401
18:30	MCYR Social Evening	Atrium

Notes

Friday, 10.10.2025

Location

9:00 - 11:00	In-Person Poster Session, Workshops (Online)	Atrium
11:00 - 12:00	Coffee Break and Poster Discussion Online Poster Session	Atrium
12:00-13:00	Lunch Break	Atrium
13:00-15:30	Parallel Session: Climate & Sustainability (I)	Room 315
	Parallel Session: Animals & Ecology (I)	Room 313
15:30-16:00	Coffee Break	Atrium
16:00-17:30	Parallel Session: Climate & Sustainability (II)	Room 315
	Parallel Session: Animals & Ecology (II)	Room 313
17:30	Conference Wrap-Up, Awards Ceremony	Room 401

Notes

Opening Ceremony and Keynote Speeches

The conference will open with a welcome address by **Assoc. Prof. Dr. Hynek Roubík**, Director of the BioResources & Technology Division (BRT) and Dean of the Faculty of Tropical AgriSciences (FTA) at the *Czech University of Life Sciences Prague (CZU)*. Dr Roubík will officially launch the 2025 MCYR and set the stage for our two inspiring keynotes that highlight the value of multidisciplinary collaboration and scientific transparency.

Beyond Curiosity: Building Purposeful Research for a Changing World

“In research, curiosity is only the beginning. The real journey is about turning that curiosity into purpose-driven, reproducible, and socially relevant science.”

— Assoc. Prof. Dr. Hynek Roubík, Dean of the Faculty of Tropical AgriSciences, Director of BRT, Czech University of Life Sciences Prague

In his 2025 keynote address at the MCYR conference, **Assoc. Prof. Dr. Hynek Roubík** will seek to inspire a new generation of researchers with a powerful message: the journey from curiosity to impact begins with intentional, ethically grounded science.

As the research landscape becomes increasingly complex, marked by demands for open science, reproducibility, and global relevance, Assoc. Prof. Dr. Roubík will explore how early-career researchers can shape their academic paths to remain meaningful, resilient, and transformative. He will discuss the evolving role of the researcher, highlighting the transition from exploration to intentionality and the need to embrace interdisciplinary and cross-sectoral collaboration.

Drawing on his own experience in international research, applied sustainability, and academic leadership, Assoc. Prof. Dr. Roubík will address the tensions many young scientists face between academic expectations and personal values, between ambition and burnout, and between output and purpose. He will emphasise the importance of reproducibility, transparency, and ethical responsibility—not as obligations, but as pillars of scientific integrity and long-term credibility. Crucially, the keynote will provide strategies for aligning scientific curiosity with societal and planetary needs, while also cultivating a sustainable personal growth trajectory. Assoc. Prof. Dr. Roubík will encourage researchers to define success on their own terms, build authentic networks, and pursue science not just for publication, but for impact.

“You are not just building a CV-you’re building the future. And do not forget: Be curious. Be courageous. Be kind.”

— Assoc. Prof. Dr. Hynek Roubík

Following the opening keynote, two invited speakers will continue the conversation on collaboration and scientific openness:

Dr. Nils Haneklaus, *Department for Knowledge and Communication Management,
University for Continuing Education Krems (Donau-Universität Krems), Austria*

Dr. Nils Haneklaus is an environmental scientist and policy expert working at the crossroads of innovation, sustainability, and global cooperation. With extensive experience in international research initiatives, his keynote will explore how equitable partnerships between the Global North and South can accelerate progress toward shared sustainability goals.

Dr. Inge Stegeman, *Utrecht Young Academy & University Medical Center
Utrecht, Netherlands*

Dr. Stegeman brings a strong background in clinical research and open-science advocacy. She will discuss how transparency and reproducibility strengthen research quality, education, and public trust, offering practical insight for early-career scientists.

Storytelling Award

During the Opening Ceremony, MCYR will honour the winners of the Storytelling Award, recognising outstanding ability to communicate research through compelling and accessible narratives. The competition encourages presenters to transform their abstracts into engaging stories that connect science with society, drawing inspiration from the European projects OSIRIS, COMUNIDAD, BIO-CAPITAL, and AgriSci-UA.

Group Photo

At the end of the Opening Ceremony, all participants are warmly invited to join the **official MCYR 2025 Group Photo**, a tradition capturing the spirit of collaboration and shared curiosity that defines the conference.

Detailed program of MCYR

Thursday, 9.10.2025

Place

11:00-12:00	Parallel Session: Plants and Agriculture (I)	Room 315
	Parallel Session: Technology and Innovation (I)	Room 313

Session: Plants and Agriculture (I)

Chair: Ing. Mgr. Adam Hruška, BRT Junior Researcher; PhD candidate

Room 315	Vertical Gardens and Invisible Guests: Health Implications of Mycobacteria in Indoor Green Walls	Ivana Karberová, Tadeáš Hrušovský, Vít Ulmann, Helena Lorencová, Ivo Pavlík	
	Factors Affecting Member Loyalty Towards Farmer Cooperatives. Case of Ugandan Districts: Iganga, Bugiri, and Namutumba	Abel Keith Mukisa, John Ilukor, Phiona Jackline Mukisa	
	Genomic-Phenotypic Comparative Study on Antifungal, Plant Growth Promoting, Bioremediating Aspects of Bacillus subtilis NSS, a Gut Isolated of Hemidactylus Flaviviridis	Sandipan Banerjee, Krishnendu Pramanik, Srinivasan Balachandran, Hynek Roubík, Narayan Chandra Mandal	
	Local Markets – Importance for Regional Food Systems and State Security	Grzegorz Malitka, Emilia Sobczak, Tomasz Samburski, Anna Sobczak-Samburska	
	Advances in Genomics of Enset (Ensete Ventricosum) and its Applications in for Improvement in Ethiopia – A Review	Eden Fasika Haile, Bohdan Lojka, Hewan Degu Demissie, Marie Kalousová	

Session: Technology and Innovation (I)

Chair: Dr. Nils Haneklaus, University for Continuing Education Krems

Room 313	Subcritical Water Extraction as an Emerging Green Technology for Waste Valorisation in the Bio-Circular Economy: A Review	Aishwarya Chaure, Hynek Roubik	
	Green Composites from Agro-Waste: Exploring the Potential of Banana Pseudo-Stem and Pineapple Leaf Fibers	Aminah Firashinta, Rajesh Kumar Mishra	
	Prediction of Biogas Production Rate from UASB Reactor by Artificial Neural Network and Nonlinear Regressions Models	Kinda Ali, Read Jafer, Adel Awad, Hussam Saboh	
	Biodegradation of Polyurethane Odour Carriers in Natural Environment: Microbial Degradation and Material Breakdown	Anshu Shaw, Nikol Modrackova, Martin Lexa, Olga Solcova, Lenka Wimmerova	
	Assessment of Water Quality of Al-Sin Lake using the Iranian Water Quality Index (IRWQI_sc) and Artificial Neural Networks (ANN)	Zaina Mayea, Raed Jafar, Aliaa Gbilly	

13:00-15:30	Parallel Session: Plants and Agriculture (II)	Room 315
	Parallel Session: Technology and Innovation (II)	Room 313
	Parallel Session: Society and Culture (I)	Room 401

Session: Plants and Agriculture (II)

Chair: Dr. Sandipan Banerjee, BRT Postdoctoral Researcher

Room 315	Formulation and Evaluation of Standard and Low-Sugar Beetroot Jams Enriched with Strawberry	Mangala Nissanka, Jan Bárta	
	Development of Adaptive Technologies for Growing Niche Crops in the Conditions of the Southern Steppe of Ukraine under Climate Change	Tetiana Manushkina, Mykola Manushkin, Serhii Serafym	
	Effect of Burial Depth and Propagule Type on the Regeneration Capacity of <i>Cyperus rotundus</i> L. on Degraded Grey Soils in Ho Chi Minh City, Vietnam	Hong Quan Nong, Petr Konvalina, Hoang Kha Tra, Thai Dan Vo	
	Climate-Smart Agriculture: Enhancing Crop Resilience to Drought and Floods	Krystyna Nidielku	
	Assessment of Water Quality for Irrigation by Electrical Conductivity and Ionic Content	Yurii Dehtiarov	
	Valorization of Agricultural Residues Materials for Extraction of Nanocellulose.	Josef Bárta, Kateřina Hájková, Adam Sikora, Viera Kučerová	
	Combined Soil Application of Phosphogypsum & Vermicompost Leachate and its Effects on the Growth of Mustard (<i>Brassica juncea</i>) Plant	Rahul Keswani, Hynek Roubík, Viktoriia Chubur, Yelizaveta Chernysh, Olena Yakhnenko	
	Intensification of Anaerobic Digestion of Indian Jujube Waste through Co-Digestion, Thermal, and Alkali Pretreatment Strategies	Manvendra Kumar, Viktoriia Chubur, Hynek Roubík	
	Economic Losses from Ukraine's Crop Sector: Implications for Food Security and Sustainable Recovery	Olena Kotykova, Mykola Babych, Bohdan Babych	
	The Impact of Military Equipment Movement on Soil Hardness	Yurii Dehtiarov, Vasyl Degtyarjov	
	Thermal Responses of Wild Red Deer (<i>Cervus elaphus</i>) Meat to Sous-Vide Treatment: A Comparative Study Across Age Groups	Munkhnasan Enkhbold, Attila Lőrincz, Márk Hajnal István, Majd Elayan, Adrienn Varga-Tóth	

Session: Technology and Innovation (II)

Chair: Dr. Nils Haneklaus, University for Continuing Education Krems

Room 313	Advances in Anaerobic Digestion: Substrate Treatment and Process Modernization, a scoping review	Antoine Bercy, Adam Hruška, Hynek Roubík	
	Innovative Design And Smart Implementation Of A Parabolic Trough Solar Distiller	Fares Touaref, Istvan Seres, Istvan Farkas	
	Clean Cooking and Beyond: Multi-Sectoral Impacts of Household Biogas Adoption on Health, Environment, and Energy Behaviors in Uganda's Eastern Districts of Kapchorwa and Mbale	Phiona Jackline Mukisa, Hynek Roubík	
	Valorization of Biogas Digestate and Phosphogypsum through Pyrolysis for Biochar-Based Fertilizers	Van Hau Duong, Le Dinh Phung, Hynek Roubík	
	Utilization of Cocoa Pod Husks for the Generation of Renewable Energy in Ghana	Faithful Finney Adubofour	
	Use of Plant-Based Ingredients to Reduce the Nitrite Compounds in Meat Products	Oleh Starynskyi, Tetiana Stepanova	
	Parameter Estimation of an Equivalent Circuit Model for a 45Ah LTO Battery Using the Least-Squares Method	Hector A. Tinoco, František Šťastný, Jan Čihák	

	Strategies to Reduce Coffee Rewetting in On-Farm Solar Dryers	Laura Vanesa Cano-Rodríguez , Eduardo Duque-Dussán, Juan R. Sanz-Urbe	
	CFD Analysis of Air Vortex Formation Induced by Vehicular Traffic for Wind Energy Applications	Carlos A. Ibarra, Hector A. Tinoco , Sara Restrepo-Valencia, Dairon J. Marulanda	
	Evaluating Urban River Water Quality in Dhaka Using Geographic Information System and Machine Learning	Md. Jakaria, Md. Hasan, Maisha Mahmud, Ramisa Anjum , Mohammad Nyme Uddin	
	Empirical Analysis of Iterated Correlation Matrices	Ishrak Alhajj Hassan	
	Integrating Systems Engineering and Artificial Intelligence for Sustainable Economic Stability	Maryam Ahmadniay Motlagh	
	The Wanderers Path: Implementation of Educative and Interactive AR Game for Introducing ITENAS Bandung DKV Photography Lab in The Digital Culture Era	Raden Khairunissa Ayuningtyas , Febyalma Zahra, Nabil Fauzan, Andika Suwarja, Agustina Kusuma Dewi	

Session: Society and Culture (I)

Chair: Ing. AbdulAzeez Shobajo, BRT Junior Researcher; PhD candidate

Room 401	Evaluating Large Language Models for Personalized Nutritional Therapy: A Comparative Study on Common Health Conditions	Adam Hruška , Anna Jílková	
	From Campus to Career: How University-Industry Linkages Shape Student Futures	Abbiha Waqar , Muhammad Nauman Jamal, Muhammad Suleman Jamal	
	Implementation of the Third Mission of the University at Dragomanov Ukrainian State University	Hanna Afuzova , Iryna Markus	
	Social Inclusion via Higher Education During Wartime and Postwar Recovery: Cases from Ukraine	Olena Orzhel , Alla Havryliuk	
	Wage Disparities among Academic Staff: A Faculty-Level Case Study of Czech Public Universities	Hana Flusková , Jakub Fischer	
	Feature Ranking for Predicting Inhabitant Thermal Comfort in Urban Landscapes Using Machine Learning for Sustainable and Climate-Resilient Design	Md Tafhimul Hasan, Takrim Uddin Ahmed Jengi, Md Al Hossain Mukib , Md. Fardin Al Shafik	
	Prevalence of Cardiovascular Risk Factors among Working Adults in Ustecky Region	Iva Volešová , Ivana Lamková, Daša Stupková	
	Key Factors for Achieving Business Success Among Young Entrepreneurs: Insights from Ghana	Bernard Kwamena Cobbina Essel , Miroslava Bavorova	
	Vyshyvanka in the 21st Century: Between Folklore and Pop	Lapchenko Anastasiia	
	Youth Social Awareness Required for Economically and Environmentally Sustainable Human Development	Krists Vilemsons	
	Do SME Food Processors With Certification Perform Better Than Those Without? A Case Study From Kyrgyzstan	Emil Begimkulov , Dietrich Darr	
	An Analysis of Visual Ideology in the Film «Secretly, Greatly» (2013) and Its Contextualization with Indonesian Political Communication In the Digital Culture Era	Luki Lukmanul Hakim , Agustina Kusuma Dewi, Adi Surahman	

16:00-18:30	Parallel Session: Plants and Agriculture (III)	Room 315
	Parallel Session: Technology and Innovation (III)	Room 313
	Parallel Session: Society and Culture (II)	Room 401

Session: Plants and Agriculture (III)

Chair: Dr. Sandipan Banerjee, BRT Postdoctoral Researcher

Room 315	Use of qRT-PCR and ddPCR Methods to Detect the Expression of Major Allergens in Horticultural Crops	Agáta Hlavatá	
	In Vitro Micropropagation of <i>Olea europaea</i> L. Using Nanoparticles: A Preliminary Study on Cultivars 'Galega vulgar' and 'Frantoio'	Pavla Přinosilová	
	Comparison of Different Near-Infrared Spectroscopic Devices for Detecting the Enrichment of Plum Juice with Plant Extracts	Flora Vitalis, Gabriella Szurovecz, Matyas Lukacs, Christian Huck, Zoltan Kovacs	
	Protoplast-Based Platforms for Metabolic Engineering of Oil-Producing Crops: A Tool for Sustainable Agricultural Innovation	Paula A. Figueroa-Varela, Eduardo Duque-Dussán, Danna Susunaga	
	Enhancing the Efficacy of <i>Beaveria Bassiana</i> through Passaging and Assessment of Intra-Specific Differences among the Passages	Rakshandha Luharch, Andrea Bohata	
	Fluorescent Timers as a New Tool for Plant Recombinant Protein Monitoring	Radek Vítek, Tomáš Moravec	
	Chemical Composition, Extraction Conditions, and Biological Properties of <i>Allium sativum</i> Bulb Essential Oil from Son La Province, Vietnam	Thi Thu Hang Vo, Thi Van Anh Nguyen, Eva Samková	
	How do Microcredit Interventions Impact Agricultural Risk Management Strategies among Smallholder Farmers? Evidence from Kenya	Victor Ogada	
	Growing Tomatoes in a Hydroponic System	Piotr Caraman	

Session: Technology and Innovation (III)

Chair: Dr. Charles Ogbu, BRT Postdoctoral Researcher

Room 313	Silicon Nanoparticles Synthesis using Non-Thermal Plasma Method	Jakub Kopenec, Pavel Galář, Lucie Kasýková, Filip Matějka, Kateřina Kůsová	
	The Silent Revolution: How AI is Rewriting the Rules of Organizational Power	Cellerin Thierry	
	Assessing the Role of Expert Systems in Medical Diagnosis and Treatment Planning	Richard Marfo, Arnost Vesely	
	Digital Empathy as the New Language of Leadership	Inna Balahurovska	
	Democratizing Monitoring in Sport: A Practical Proposal, Low-Cost Training-Load Monitoring System for Young Judokas	Mathías López Córdoba, Guillermo Madruga Santomé, Paulo Varela Ambroage, Diego Pena Perez, Eduardo Carballeira Fernandez	
	Isenyas: a Basic Filipino Sign Language Educational Mobile Application for Deaf and Mute	Dave D. Lota, Blessie Leih M. Arguelles, Chennie P. Fadri, Angelie M. Tiaga, Squal Lei Garcia	
	The Potential of Second-Generation Hornbeam Wood for Structural Applications	Přemysl Šedivka	
	Research into the Influence of the Evenness of Cargo Placement in the Body of a Freight Vehicle on Stability	Oleksandr Solarov, Oleksandr Savoiskyi, Oleksandr Tatsenko	
	Sustainable Innovations in Wet Coffee Processing: Photovoltaic Energy, Zero Water Discharge, and Byproduct Valorization	Eduardo Duque-Dussan, Juan R. Sanz-Urbe, Álvaro Guerrero-Aguirre	

	Operational Optimization of a Rotative Bean Seed Shelling Machine	Jorge Alexander Londoño-Castañeda , Álvaro Guerrero-Aguirre, Santiago Jaramillo-Cardona	
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Session: Society and Culture (II)

Chair: Ing. AbdulAzeez Shobajo, BRT Junior Researcher; PhD candidate

	Assessing Labour Standards in the Cambodian Cashew Value Chain: Focus on Child Labour and Workers' Rights	Simona Tomanová , Petra Chaloupková	
	Marketing Channels and Pricing Mechanism of Cow's Milk in Latakia Governorate	Sliman Moualla , Ghaith Amin Ali	
	MicroAKIS of Demonstration Farms: Key Actors' Centrality in Knowledge Transfer	Marta Mrnuščík Konečná	
	How Do Farmers Cope? Exploring the Relationship Between Adaptation and Resilience Perception in Indonesia	Yosephine Avi Ayu Rembulan , Miroslava Bavorova	
	Assessment of Consumers' Preferences and Willingness to Pay for Improving Smoked Walking Catfish in Cambodia	Phoeurk Raksmei , Nicolas Antoine-Moussiaux, Kimchhin Sok, Arno Faivre, Thomas Dogot	
	Revitalizing Rural Morocco: the Role of Youth Agricultural Entrepreneurship in Sustainable Development	Najoua Khayati , Abdelali Lahrech	
	Recreational and Entrepreneurial Activity - Ukrainian Experience of Rural Tourism Development on the Example of Opishnya Village, Poltava Region in Personalities	Anna Pauk, Olena Korol , Olesia Kornus, Olena Danylchenko, Serhii Lutsenko	
	Futuring Brown Deer Conservation from the Lenses of the Mandaya Indigenous People	Jhonnell Villegas , Lenilyn Pua, Aneta Vidlakova, Francisco Ceacero	
	The Potential of Integrating PEST Analysis and Arjun Apadurrai's Global Flows Concept to Develop a Glocality Model for Trans-mediation in the Digital Culture Era	Agustina Kusuma Dewi , Levita Dwinaya, Adi Surahman	
	A Participatory Approach to Understanding Processes of Transformation- Community Level	Patricia Ofori-Amanfo , Julia Leventoon	
	Financial inclusion in the context of a Universities' Third Mission	Nataliia Shofolova	
	Expanding the Third Mission of Ukrainian Universities: The Role of Dissemination and the UNICOM Project	Victoria Rodinkova , Olga Bratkova, Natallia Gorbenko, Olga Drachuk	

Friday, 10.10.2025

Place

9:00 - 11:00 In-Person Poster session

Atrium

11:00 - 12:00 Online Poster session

In-Person Poster Presentations

Chair: Dr. Inge Stegeman, University Medical Center Utrecht, Netherlands

Society and Culture	Stakeholder Dynamics and Decision Pathways in Farmers' Transition from Rice to Vegetables in Indonesia	Noviria Syifaun , Nafsi, Thi Thu Giang Luu, Cory Whitney
	Sustainable Land Management Adoption: Integrating Indigenous Ecological Knowledge with Modern Practices	Peter Maes
	Towards Organic Agriculture in Emerging Economies: An Empirical Analysis of Albanian Farmers' Certification Intentions Drivers	Miroslava Bavorova, Mustapha Madaki, Peter Maes , Ayat Ullah, Edvin Zhllima
Plants and Agriculture	The Effect of Processing Methods on the Nutritional and Sensory Characteristics of African Yam Bean Flour	Gbolahan Alagbe, Alagbe Olajumoke
	Evaluation of the Suitability and Impact of Selected Natural Plant Extracts on the Quality of Canned Vegetables	Bálint Góczán , Beatrix Szabó-Nótin, Judit Friedrich-Ivanics, Mónika Máté
	Soil Macrofauna Diversity in a Silvoarable Agroforestry System in the Temperate Zone	Běla Bonušová , Nikola Teutscherová, Bohdan Lojka
	Analysis of Techno-Functional Properties Buttermilk-Containing Ice Creams	Enikő Szűcs , Ildikó Csilla Nyulas-Zeke, Rebeka Pap
	Does Forage Crop Diversification Improve Milk Productivity? Evidence from Smallholder Dairy Farmers in Kenya	Francis Mucira Murage , Miroslava Bavorová, Nils Teufel
	Environmental and Economic Assessment of Sugar Beet under Different Mineral Fertilizer and Pesticide Application Rates: A Case Study in the Czech Republic	Atif Muhammad
	Optimizing Micropropagation Protocols for Sesbania grandiflora (L.) Pers.: A Step Toward Sustainable Clonal Propagation and In Vitro Breeding	Muhammad Uzair Javed , Barbora Šírová, Iva Viehmannová
	Sustainable Biotechnological Innovation: Chitosan-Mediated Elicitation of Bioactive Compounds in Rhazya stricta for Pharmaceutical Applications	Muhammad Uzair Javed , Bilal Haider Abbasi
	In Vitro Autopolyploid induction in Solanum Stenotomum Juz. & Bukasov	Yadhira Elizabeth Huaroto Pantoja, Tadeáš Sochr , Julio Montero-Torres, Sandra Romero-Ortega, Eloy Fernández-Cusimamani
	Numerical Modeling of Coupled Water, Vapour and Heat Transport in Beech Forest Soil	Václav Steinbach , Michal Kuráž, Marta Kuželková, Lukáš Jačka
Animals and Ecology	Behavioral Assessment of Cattle for Improved Performance: The QBA Method	Adéla Višová
	Selection of Candidate Verbenyl Ester-Forming and Hydrolyzing Enzymes in <i>Ips typographus</i> (Linnaeus, 1758)	Jaroslav Strádal , Rajarajan Ramakrishnan, Ondřej Lukšan, Michal Tupec, Anna Jirošová
	Ibuprofen in Surface Water: Effects on Growth and Physiology of Selected Aquatic Plant Species	Hanna Kornacka, Magdalena Sitarska , Mirela Wolf-Baca

	Attitude of Local Community in Wildlife Conservation in Forest Farm Interface of Arsi Negelle and Guraferda Districts, Ethiopia	Melese Merewa Reta
	Drivers of Food and Live Animal Exports and Their Nexus to Agricultural Growth in Nepal: Evidence from an ARDL Approach	Namdev Upadhyay , Miroslava Bavorova, Giri Prasad Kandel
Climate and Sustainability	Evolution of Land Use in Albanian Coastal Wetlands Focusing on Remote Sensing Techniques	Anxhela Hameti , Vera Potopová, Sonila Papathimiu
	Thermal Valorization of Sewage Sludge and Gypsum Wastes for Sustainable Fertilizer Development	Chhorth Chhiengputheavy , Filip Mercl, Leidy Marcela Ulloa Murillo, Hynek Roubík
	Fog Dynamics in the Sumy Region (Ukraine) in the Context of Changing Weather Patterns	Diana Topchii , Anatolii Kornus
	MWAZACO - Building Zambia's First Mine Water Atlas: An Integrated Approach to Mapping, Risk Assessment, and Reuse of Mine-Affected Water Resources	Michal Žák, Imasiku A. Nyambe, Jan Staš , Chama Theodore Ketuama, Jackson King Kafwanka
	Evaluation of Antimicrobial Effects of Natural Essential Oils in Fermented Meat Products	M.Şefik Özel
	The Spread of the Invasive Species Acer Negundo L. with Climate Change: Results of Climate Modelling for 17 European Countries	Nataliia Miroshnyk , Ihor Teslenko, -
	Investigating the Effect of Different Organic Materials on the Reclamation of Salt Affected Soils	Seren Zedan , Erastus Wasikoyo, Dr. József Zsembeli
	Developing a Socioeconomic Assessment Tool for Biogas Adoption of Sugarcane Farmers in Nigeria	AbdulAzeez Shobajo , Viktoriia Chubur, Hynek Roubík
	The Role of Agricultural Cooperatives in Sustainable Value Chains: Evidence from Battambang Province, Cambodia	Sreykhouch EK , Petra Chaloupková, Jiří Hejkrlik
Technology and Innovation	Investigation of the Technological and Sensory Properties of Various Plant-Based Egg Substitutes	Ágnes Abai, Anikó Sándor, Karina Ilona Hidas
	Development of Egg White-Based Sweets for Athletes	Adrienn Varga-Tóth , László Friedrich, János Prióth, Csaba Németh
	Applications of MALDI-TOF MS in Peptide Profiling and Quality Assessment of Commercial Yoghurt	Ali Haider , Andrea Pomázi, Csilla Mohácsi-Farkas, Marianna Ringer, Tamás Kocsis
	A Comparative Analysis of the Temperature Data for Fresh Beef Products within the E-Commerce Supply Chain	Anikó Boros , Adrienn Vargáné Tóth, Andrea Sallainé Bajkai, László Ferenc Friedrich
	Development and Analysis of Structural Element Based on Oriented Strand Board	Bohumil Zoufalík
	Natural Language Processing for Stakeholder Requirements Analysis: Bridging Communication Gaps in Cross-Disciplinary Sustainable Technology Projects	Cornelius Chimuanya Okechukwu , Radek Silhavy
	Investigation of Effects of Ultrasound-Assisted Dry Curing on Pork Loin Quality	Gábor Jónás , Anna Visy, József Surányi, Khamthidaphone Vansilalom, László Friedrich
	Evaluation of Curd Desserts with Different Protein Supplements	Ildikó Nyulas-Zeke , Anikó Sándor, Karina Hidas, Klára Pásztor-Huszár, Adrienn Varga-Tóth
	The Impact of Different Composition and Delignification Methods on the Optical Properties of Transparent Wood	Kateřina Hájková , Tomáš Holeček, Martin Růžicka
	Can Fungi Clean the Ocean? Exploring the Oil Sorption Potential of Mycelium Biocomposites	Miroslav Jozífek , Benjamín Petržela

	Kraft Lignin-Enhanced Urea-Formaldehyde Resin as a Renewable Binder for Particleboard Production	Miroslav Němec , Tomáš Kytka, Štěpán Hýsek
	The Potential of Geometric and Radiometric Airborne LiDAR Features in Determining when the Standing Trees Died – Case Study Bohemian Switzerland National Park, Czech Republic	Rorai Pereira Martins-Neto , Peter Surový
	Strategic Approaches to Facilitating Real-World Asset (RWA) Adoption	Seung-Seok Lee , Sang-Joon Lee
	IoT and Wireless Sensor Networks Integration for Renewable Energy and Smart Grid Systems	Viacheslav Radchenko
	Wireless Sensor Networks for Energy Systems and Environmental Monitoring	Vladyslav Diachenko
	Comparative Evaluation of Gaseous and Microbubble-Based 1-Methylcyclopropene Treatments on the Postharvest Ripening of Green-Harvested Tomatoes	Zsuzsanna Horváth-Mezőfi , Anikó Sándor, Koppány Majzinger, Tamás Zsom, Géza Hítka

Online Poster Presentations



Chair: Ing. Mgr. Adam Hruška, BRT Junior Researcher; PhD candidate

Society and Culture	Cross-Border River Vlára: Analysis and Assessment of the Cultural and Recreational Potential of the River and Its Adjacent Floodplain	Ivana Karberová , Klára Nesitová, Helena Lorencová
	Development and Transformation of Eurasianism During the Cold War – Eurasianism in the Soviet Intellectual Milieu	Michal Racyn
	Sustainable Development of Rural Communities through Environmental Education: A Multidisciplinary Approach in Action	Oksana Shcherbak , Olha Kruhliak, Svitlana Kovtun
	Food Identity and Its Role in Food Security Status in Greater Accra, Ghana	Rhoda Lomotey , Jan Banout
	EU Implementation of Bioenergy Technologies for Waste Recycling: Jean Monnet Module Realization	Yelizaveta Chernysh , Viktoriia Chubur, Yevhen Bataltsev
	War-induced Transformations in Ukrainians' Food Consumption Behavior	Tetyana Dyman , Ruslana Zadorozhna, Nataliya Dyman
Plants and Agriculture	Sanitation Measures in the Environment of Milking Parlor	Mária Vargová , Michaela, Harčárová, František, Zigo
	The Role of Sustainable Agriculture in Ensuring Food Security and National Stability	Emilia Sobczak , Tomasz Samburski, Grzegorz Malitka, Anna Sobczak-Samburska, Anna Sobczak-Samburska
	Evaluation of Heat Treatment of Soy Products	Petra Timkovičová Lacková , Iveta Maskal'ová, Jakub Křišťák
	Food Security as a National Security Policy Priority	Tomasz Samburski , Emilia Sobczak, Grzegorz Malitka, Anna Sobczak-Samburska
Animals and Ecology	The Effect of High Hydrostatic Pressure Treatment on the Surface Discoloration of Fattened Goose Liver	Koppány László Majzinger, Vilmos Lehota , Gábor Jónás, László Ferenc Friedrich
	Detection and Occurrence of Deoxynivalenol in Quail Feed	Michaela Harčárová , Lukáš Bujňák, Alica Tvrdá
	Evaluation of the Intestinal Microbiota in Piglets After Three Weeks of Feeding a Diet Supplemented with Dried Stinging Nettle Leaves	Stanislav Hreško , Alena Hreško Šamudovská, Tomáš Mihok, Lukáš Bujňák

	Rethinking Poultry Farming: Natural Additives for a Healthier and Greener Future	Zuzana Kiššová , Viera Karařfová, Stanislav Hreško, Alena Hreško Šamudovská , Lukáš Bujňák
Technology and Innovation	The Role of Geoinformation Technologies in the Formation of Ecotourism Skills on the Example of Sumy Region, Ukraine	Olena Korol, Anna Pauk , Olena Danylchenko, Olesia Kornus, Anatolii Kornus
	Assessing Competitiveness of Broiler Production in Umzingwane, Zimbabwe: A Comparative Analysis with South African Poultry Imports	Welcome Zimuto
	Phosphorus from Waste to Resource: A Review of Complementary Technologies in Aquaculture Management	Yelizaveta Chernysh , Ahmet Demirak
	Robotic Fruit Picking Using AI and Robotic Arms: A Novel Technological Approach	Milan Englárt , Vladimír Cviklovič
Climate and Sustainability	The Role of Educational Stands in Preserving Ecosystems of Hydrological Objects on the Example of Sumy, Ukraine	Daria Herasymenko , Serhii Lutsenko, Anatolii Kornus, Olesia Kornus, Maksym Rudnev
	Carbon Storage in Family-Run Cocoa Agroecosystems: A spatial assessment of an agricultural landscape influenced by a Ramsar site in Coastal Ecuador	Malena Torres-Ulloa , Vladimir Verner, Diego Portalanza, Omar Ruiz-Barzola, Patrick, Van Damme
	Phytoremediation of Pharmaceutical Wastes: A Safer Approach for Sustainable Environment	Oluwafunmilola Ogundipe

Notes

13:00-15:30

Parallel Session: Climate and Sustainability (I)

Room 315

Parallel Session: Animals and Ecology (I)

Room 313

Session: Animals and Ecology (I)

Chair: Dr. Aishwarya Chaure, Postdoctoral Researcher

Room 315	Bioaccumulated Trace Element Toxicity in Commercially Harvested Bronze Whaler Sharks (<i>Carcharhinus brachyurus</i>) of South Africa	Adetola Adebawale, Justin O'Riain, Toby Rogers, Matt Dicken, Vincent Naude	
	Impact of Pharmaceutical Contamination on Fish Neurotransmission	Gayani Rajakaruna Kapukotuwa, Jan Turek, Tomas Randak, Ganna Fedorova	
	Population Trends and Current Threats to the Great Cormorant (<i>Phalacrocorax carbo</i>) in the Azov-Black Sea Region of Ukraine	Andrii Sydorenko	
	Effects of Black Soldier Fly Meal Inclusion on Protein Denaturation in African Catfish (<i>Clarias Gariepinus</i>)	Hannah Moncon Farr, IldikóNyulas-Zeke, Balázs Csorbai, Koppány Majzinger, Tamás Bartucz	
	Sex Effects on Growth Performance of Noiler Chickens Reared under Intensive Management System	Nofisat Abisola Muhammed, Kabir Adesina Taiwo, Sani Garba, M.I. Haliru, A.A. Jimoh	
	Integrating Local Biodiversity Data in a Contextualized Environmental Science Module	John Kenny A. Rafon, Jhonnel P. Villegas	

Session: Climate and Sustainability (I)

Chair: Ing. Antoine Bercy, BRT Junior Researcher; PhD candidate

Room 313	Eco-Friendly Photocatalytic Dyes Removal Using CuO/ZnO Nanoparticles Incorporated into Metal Organic Framework-5	Malaika Razzaq Khan	
	Hydropower's Sustainability and Environment Conflict: Insights from Ravi River Basin in Himachal Pradesh, India	Diksha Kumari, Pawan Kumar Attri	
	Biogas-Oriented Pretreatment of Lignocellulosic Substrates	Dmytro Hopkalo, Roman Vaskin, Dmytro Matykha, Eugen Zaika	
	A Comprehensive Examination of the Neglected and Missing Thread Between the Formulation and Execution of Biogas Policies in the Global South, Resulting in the Sustainable Adaptation of Biogas Technology	Tewodros Tarekegn Lapiso, Hynek Roubik	
	Recycled Cotton Insulation Boards: A Sustainable Alternative for Thermal and Structural Applications	Tadeáš Zachara, Přemysl Šedivka, Kryštof Kubista	
	Predicting CO ₂ Concentrations in University Cafeterias Using Regression-Based Machine Learning Models	Mim Mony, Mahabuba Porosh Moni, Lamia Jamal, Firuja Tasneem, Nowshin NowyerOyshi	
	Predicting Temperature Variations in Laboratory Environments Using Regression-Based Machine Learning Models	Devesis Mondal Dipta, G. M. Rahad, Jobayer Hossain, Md. Naziur Rahman	
	Ruminal Impaction due to Plastic Pollution: Possible Measures and Legal Consequences	Rupak Kumar, Akanksha Garg Agarwal	

16:00-17:30	Parallel Session: Climate and Sustainability (II)	Room 315
	Parallel Session: Animals and Ecology (II)	Room 313

Session: Animals and Ecology (II)

Chair: Aishwarya Chaure, Postdoctoral Researcher

Room 315	Tickborne or Not? Exploring the Role of Ticks in Neglected Zoonotic Bacterial Transmission	Anna Dvořáková , Jiří Černý, Kateřina Kybicová	
	The Influence of Frequency Analysis on the Optimisation of Processes in Living Organisms and Thus Also on Farms	Dirk Osada	
	Description of a new species of Tsounkranaglenea Lin & Ge, 2021 (Coleoptera: Lamiinae: Saperdini) from Davao de Oro, Mindanao, Philippines	Milton Norman Medina , Arvids Barsevskis	
	Forest Fragmentation and Bird Diversity in the Um Al-Toyour and Al-Bassit Reserve, Syria	Maher Dayyoub , Basima Alsheikh	
	Current Trends and Genetic Factors in the Formation of Economically Important Traits in Ukrainian Red-and-White Dairy Cattle under Absorptive Crossbreeding	Olha Kruhliak , Andrii Kruhliak, Tetiana Kruhliak	

Session: Climate and Sustainability (II)

Chair: Ing. Antoine Bercy, BRT Junior Researcher; PhD candidate

Room 313	Non-native Crop Diversification with Pitahaya: Climate Adaptation Panacea or Pandora's box for Philippine Agriculture?	Tadeáš Hrušovský , Tomáš Lošák, Rhea Joy D. Flora	
	Analysis of the Impact of Stakeholder Groups on the Implementation of Sustainable Development on the Global Market	Andrii Mykhailenko	
	Turmeric Growers' Livelihood Vulnerability to Climate Change: Index based Evidence from Mizoram in North Eastern Himalayan Region of India	Chetan Ashok Iragar , Sheikh Mohammad Feroze, Lalrinsangpuui, Koijam Johny Singh	
	Energy Efficiency and Innovativeness of The Application of Fibers in Road Cement Concrete	Artem Lapchenko	
	Urban Public Space Crisis in Ulaanbaatar: Overcoming Challenges and Unlocking Green Potential	Nomin Enkhtamir	
	The Impact of Organic Loading Rate on the Effectiveness of Co-Digestion of Leachate from Composting of Biowaste and Waste Glycerine	Thi Cam Tu Le , Katarzyna Bernat, Dorota Kulikowska	
	From Waste to Energy: Thermo-chemical Properties and Combustion Performance of Coffee Pulp Biomass	Valentina Cruz-Ospina , Eduardo Duque-Dussán, Juan R., Sanz-Urbe	

Notes

Online Workshop

Building Self-Sufficient Communities: Local Value Addition, Empowerment, and Social Reinvestment

Organisers:

Bernard Kwamena Cobbina Essel (Czech University of Life Science Prague, Czech Republic; Living Innovation and Impact Centre, Kumasi, Ghana)

Miroslava Bavorova (Czech University of Life Science Prague, Czech Republic)

Time: 9:00-10:30 (Online Workshop), 10.10.2025

Platform: Microsoft Teams, meeting ID: 393 050 999 898, access code: JN7TA7j9

Registration: <https://forms.office.com/e/bm48TesWsN>

Workshop Overview:

This workshop explores practical pathways for building self-sustaining communities in Africa by focusing on three interconnected pillars: local value addition, empowerment of women and youth, and reinvestment of community-generated income into social infrastructure. Participants will learn how rural communities can leverage agricultural and human resources to generate employment, increase local income, and stimulate social development. Through interactive presentations, case studies including Cocoa360 in Ghana and hands-on exercises, attendees will map local resources, design value-added products, and develop strategies for inclusive governance and reinvestment into education, health, and infrastructure. The session emphasizes skills development, entrepreneurship, and participatory decision-making, providing participants with actionable frameworks to implement self-sufficiency models in their own communities. By linking economic empowerment to social reinvestment, the workshop demonstrates how communities can achieve resilience, retain economic value locally, and contribute to Sustainable Development Goals (SDGs) including poverty reduction, gender equality, decent work, and sustainable communities.

Online Post-Conference Workshop

Exploring Research Landscapes in Bioenergy, Bioeconomy, Innovation, and Waste Valorization through Bibliometric Analysis with VOS Viewer (Jean Monnet Module “BIOINWASTE”)

Organisers:

Chernysh Yelizaveta (Sumy State University, Ukraine; Czech University of Life Science Prague, Czech Republic)

Time: 10:00-12:00 (Online Workshop), 11.10.2025

Platform: Microsoft Teams, meeting ID: 393 050 999 898, access code: JN7TA7j9

Registration: <https://forms.office.com/e/bm48TesWsN>

Workshop Overview:

The workshop is designed to introduce participants to the methodological and practical aspects of bibliometric analysis as a powerful research tool in the field of bioeconomy, innovation, and waste valorization studies. The purpose of the workshop is to equip early-career researchers, postgraduate students, and academic staff with the ability to explore scientific landscapes, identify key research trends, and map collaborative networks using VOS Viewer software. The session will begin with an overview of bibliometrics, including its role in evidence-based research evaluation, followed by a step-by-step demonstration of how to collect bibliographic data from international databases such as Scopus and Web of Science. Participants will then be guided through data import, processing, and visualization techniques in VOS Viewer, with a focus on interpreting co-authorship, keyword co-occurrence, and citation network maps. By the end of the workshop, participants will have a clear understanding of how bibliometric analysis can support their research, enhance publication strategies, and contribute to the broader objectives of the BIOINWASTE module in advancing sustainable knowledge and policy development.

Scientific Committee

Assoc. Prof. **Dr. Hynek Roubík**, Head of
Scientific Committee
Czech University of Life Sciences Prague,
Prague, Czech Republic

Assoc. Prof. Dr. **Yelizaveta Chernysh**
Sumy State University, Sumy, Ukraine;
Czech University of Life Sciences Prague,
Prague, Czech Republic

Prof. **Mykola Kharytonov**
Dnipro State Agrarian and Economic
University, Dnipro, Ukraine

Assoc. Prof. Dr. **Iryna Ablieieva**
Sumy State University, Sumy, Ukraine

Prof. **Le Dinh Phung**
University of Agriculture and Forestry,
Hue University, Hue city, Vietnam

Dr. **Mijalche Santa**
Ss. Cyril and Methodius University in
Skopje, North Macedonia

Dr. **Nils Haneklaus**
Universität für Weiterbildung Krems,
Krems an der Donau, Austria;
Technische Universität Bergakademie
Freiberg, Freiberg, Germany

Dr. **Hesham Lotfy**
Delta University for Science and
Technology, Al-Dakahlia, Egypt

Dr. **Raed Jafar**
Tishreen University, Latakia, Syria

Dr. **Viktoriia Chubur**
Czech University of Life Sciences Prague,
Prague, Czech Republic

Dr. **Chama Theodore Ketuama**
Czech University of Life Sciences Prague,
Prague, Czech Republic

Dr. **Aishwarya Chaure**
Czech University of Life Sciences Prague,
Prague, Czech Republic

Organizing Committee

Viktoriia Chubur

Antoine Bercy

Stacy Hammond

Masha Gulak

Marek Jelínek

Jan Staš

Aishwarya Chaure

Sandipan Banerjee

Chama Theodore Ketuama

Charles Ogbu

Paula Andrea Castro Martinez

Hidayatul Fitri

AbdulAzeez Shobajo

Phiona Jackline Mukisa

Adam Hruška

Manvendra Kumar

Lydia Mawar Ningsih

Chhorth Chhiengputheavy

Ayeah Gideon Gobti

Hynek Roubík

Partners



Strengthening AgriSciences in Ukraine:
AgriSci-UA



Open Science to Increase Reproducibility
In Science



Combined Use of EGNSS and Copernicus
Data to Develop Innovative Downstream
Services for Users from Chile and
Colombia



Mobilising Investments for Protecting and
Restoring Biodiversity by Harnessing
Innovative Financial Solutions and
Advanced Geospatial Analytics.



UNICOM: Universities – Communities:
strengthening cooperation

Conference organised and hosted by:



Faculty of Tropical
AgriSciences



**BioResources
& Technology**

About Czech University of Life Sciences

The Czech University of Life Sciences Prague (CZU) is one of the leading European institutions in the field of life sciences (Around 50th place worldwide in Agriculture and Forestry).

CZU is not just a life sciences university, but a place of innovative scientific research and discovery.

We live in a world where natural resources are being depleted at an alarming rate.

CZU emphasizes education and research in sustainable development and the conservation of biodiversity along with the responsible use of natural resources and alternative, renewable means of energy production.

CZU Prague is situated on the outskirts of Prague, on a quiet and well-equipped campus that is easily reachable from the city centre by public transport.

CZU is one of the largest universities in the Czech Republic, offering over 220 Bachelor's, Master's, and PhD study programmes. Over 50 study programmes are taught entirely in English.

More than three hundred students from our university travel each year in the framework of the Erasmus+ mobility programme, traveling to 27 countries in Europe to study for a semester or one academic year at over 200 universities throughout Europe.



About Faculty of Tropical AgriSciences

The Faculty of Tropical AgriSciences (FTA), the Czech University of Life Sciences Prague (CZU) is a unique institution in our country with over fifty years of tradition in tropical agriculture, rural development and the sustainable management of natural resources in the tropics.

The mission of the Faculty:

The mission of the faculty is the higher education of foreign and Czech students in the fields of tropical agriculture, rural development and the sustainable management of natural and energy resources in the tropics. An integral part of our mission is Research and Development in the field of tropical life sciences and the application of R&D results to the specific conditions of tropical and/or developing countries.

The vision of the Faculty:

To be an excellent and very specific institution in the Czech Republic orientated towards the transfer of the latest knowledge and technology between the Czech Republic, the EU and tropical regions respecting the traditional values of the local communities of the developing world as well as their level of socio-economic and technological development.



About BioResources & Technology

We are the BRT at the Faculty of Tropical AgriSciences, Czech University of Life Sciences Prague! We operate under the leadership of Assoc. Prof. Ing. Hynek Roubík, Ph.D. Together, we are a dynamic group of researchers dedicated to advancing biogas research, bioresources management and sustainable technologies. Our motto is 'Fearless minds, Endless potential'.

Our research and innovation objectives encompass a wide array of thematic, from the determination of the real impact of small biogas plants (both in developing and developed countries) on the environment, climate change and society to bioresources technologies, including bioenergy, environmental aspects, food security, waste management, biotechnologies and more. The global shift towards renewable energy and sustainable practices has reinforced the importance of holistic approaches to resource management. This underscores our commitment to fostering collaboration across these disciplines, enhancing our ability to address complex sustainability challenges. Interdisciplinary research is at the core of the BRT.

Our team comprises environmental science, engineering, agriculture, and social sciences expertise. The BRT is committed to applying our research findings to real-world challenges. Our team works with a broad range of stakeholders, including local communities, policymakers, researchers, NGOs, education centres, universities, etc. This expanded network enables us to scale our impact and effectively apply our research findings to real-world challenges. Because here at BRT, we strive to see our results in real-world applications!

What are we starting to work on more intensively?

The BioResources & Technology Division focuses on various fields to advance the development and implementation of organic waste management and sustainable technologies in general. Here are some examples:

Waste Management and BioResources & Technology

A combination of technological innovation, environmental sustainability, and social and behavioural factors drives the overall activities of BioResources & Technology and waste management research. Waste management is an increasingly pressing issue in many parts of the world, and immediate solutions are required.

Waste Reduction: One of the most important goals of waste management is to reduce the amount of waste generated in the first place. Waste reduction strategies can include better product design, more efficient manufacturing processes, and greater use of recycling and reuse.

Resource Recovery: Another important area of waste management research is the recovery of resources from waste. This can include the extraction of valuable materials from waste streams, such as metals and other minerals, and energy generation from waste.

Technological Innovation: Waste management research also focuses on developing new technologies that can improve the efficiency and effectiveness of waste management. These are new sorting and separation technologies, advanced recycling processes, and new methods

for converting waste into energy. Especially those focused on low-cost and simple implementation.

Circular Economy: The concept of a circular economy, in which waste is minimized and materials are used for as long as possible, is becoming increasingly important in waste management research. This approach emphasizes the importance of closing the loop on materials and reducing waste generation by redesigning products and business models.

Social and Behavioural Factors: Waste management research focuses on the social and behavioural factors influencing waste generation and disposal. This could include research on consumer behaviour, public attitudes towards waste management, and the role of education and outreach in promoting sustainable waste management practices.

Biogas research and its intricacies:

- **Feedstock diversity and optimization:** Biogas research teams investigate new and underutilized feedstocks, such as algae, seaweed, and aquatic plants, to expand the range of materials that can be used for biogas production. Trying to explore ways to optimize the use of current feedstocks to improve biogas yields and reduce biogas plant costs.
- **Advanced biogas production techniques:** There is still much to be learned about the most efficient and effective ways to produce biogas, particularly in terms of reactor design, temperature and pH control, and pre- and post-treatment processes. The BRT investigates novel reactor configurations, such as membrane-based and two-phase systems, and new techniques for nutrient and pH control in the biogas plant.
- **Biogas utilization and storage:** Once biogas is produced, it must be stored and utilized efficiently and effectively. Biogas Research Teams plans to explore new storage and utilization technologies, as well as ways to optimize existing storage and utilization methods.
- **Environmental and social impacts of biogas production:** As biogas production continues to expand, it is important to understand this technology's environmental and social impacts. Biogas Research Teams studies the emissions and ecological impacts of biogas production and use, as well as the social and economic benefits and challenges of biogas implementation.
- **Integration of biogas into energy systems:** Biogas production can be integrated into existing energy systems in a variety of ways, such as by using biogas to supplement or replace fossil fuels in electricity generation, heating, and transportation. Biogas Research Teams investigates the technical and economic feasibility of these integration strategies, as well as the policy and regulatory frameworks needed to support them.

About projects

We are pleased to highlight a selection of projects that reflect the spirit of collaboration and innovation at MCYR 2025.

OSIRIS: OPEN SCIENCE TO INCREASE REPRODUCIBILITY IN SCIENCE

Reproducibility is crucial to the progress and impact of Research and Innovation (R&I) as it confirms or corrects the outcomes of single studies, resulting in higher quality research, more reliable and implementable outcomes, and a reduction of research costs. Embedding reproducibility in the strategy and design of research should thus be regarded as a key precondition to research quality.

OSIRIS aims to facilitate this shift by systematically gathering knowledge on the underlying drivers, testing effective evidence-based solutions, identifying incentives for reproducibility by stakeholders, and embedding reproducibility in research design.

This will be realised by a unique team with hands-on expertise in Open Science (OS), reproducibility, implementation, and data sharing, along with a range of committed stakeholders.

More information: <https://osiris4r.eu/>

The OSIRIS project is funded by the European Union's Horizon Europe research and innovation programme under grant agreement No. 101094725.



COMUNIDAD: Combined Use of EGNSS and Copernicus Data to Develop Innovative Downstream Services for Users from Chile and Colombia

The COMUNIDAD project aims to develop, test, and implement an innovative framework that leverages Copernicus data to support agriculture, forestry, and rural development in Chile and Colombia. By integrating multiple data sources on the COMUNIDAD Platform, the project will facilitate the use of EGNSS (European Global Navigation Satellite Systems) and promote collaboration with both public and private sectors in the target regions. This collaboration will help introduce EU space-based applications and co-develop algorithms, services, and products that meet local user needs.

COMUNIDAD will drive the long-term development of sustainable agriculture and forestry practices by supporting policy strategy development through Pilot Applications in Chile and Colombia. The combined use of EGNSS and Copernicus data will foster the creation of innovative downstream applications, blending positioning, navigation, and timing services with Earth observation data. These applications will be co-developed with the active involvement of regional end-users, decision-makers, and support organizations.

By engaging local and regional stakeholders, the project demonstrates the feasibility of transferring results, identifying potential barriers, and adding value to the creation of new markets. The project emphasizes information sharing, open access, and transparency, making it a significant resource for the target regions. The COMUNIDAD Platform will integrate existing services and solutions to address new regions with high potential for application.

More information: <https://comunidad-project.eu/>

The COMUNIDAD project is funded by the European Union under grant agreement No. 101131859



BIO-CAPITAL: Mobilising investments for protecting and restoring biodiversity by harnessing innovative financial solutions and advanced geospatial analytics

BIO-CAPITAL is an innovative project dedicated to addressing the critical challenge of biodiversity protection and restoration. By integrating technological advances within the field of geospatial analytics with sustainable financing solutions, the project aims to bridge the gap between ecological preservation and the need for increased private investment in conservation efforts.

The project adopts an interdisciplinary approach, combining expertise in biodiversity protection, the development of biodiversity-friendly financing mechanisms, and the application of advanced space technologies. These elements are brought together to create transformative solutions that enhance financial flows for biodiversity protection, restoration and sustainable utilisation.

More information: www.bio-capital.eu

This project has received funding from the European Union's Horizon Research and Innovation Programme under grant agreement No. 101135150.



AgriSci-UA - AgriSciences Platform for Scientific Enhancement of HEIs in Ukraine

The platform aims to enhance the capabilities and collaboration among universities in the area of AgriSciences and to improve the scientific capacities of young educators, researchers, and postgraduate students at select Ukrainian universities. This will be accomplished through the continued development of the AgriSciences Platform, which focuses on increasing expertise in key areas of agrarian sciences, crucial for Ukraine's post-war development.

Beyond traditional AgriSciences topics, the project addresses urgent issues specific to present-day Ukraine, including the environmental and social impacts of the war. Furthermore, the project will also foster the formation of multidisciplinary research teams and offer grant opportunities to address these emerging challenges. These initiatives are critical for addressing Ukraine's needs during and after the conflict.

More information: <https://agrisci-ua.com/>

AgriSci-UA project is supported by Czech Republic Development Cooperation via Ministry of Foreign Affairs of the Czech Republic.



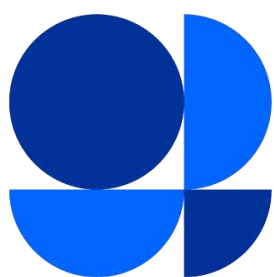
UNICOM: Universities – Communities: strengthening cooperation

The general objective of the project is to enhance universities' social role through boosting university-community engagement, leading to the elaboration of state policy on supporting the third mission of universities for ensuring social cohesion, resilience, sustainability and prosperity in Ukraine.

The UNICOM project aims to foster cooperation between Ukrainian universities and their surrounding communities by incorporating best practices from EU states such as Italy, Germany, Sweden, Latvia and Czech Republic. The project activities include developing policies to enhance the third mission of universities, analyzing the needs of communities and universities across Ukraine, and capacity-building for university staff through exchange programs focused on resilience, sustainability, inclusion, entrepreneurship, environment, public health, and social cohesion.

The project is a promising step towards promoting the third mission of universities in Ukraine and strengthening university-community cooperation..

More information: <https://unicom.community/en/unicom-home/>



unicom



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