

5th International Multidisciplinary Conference for Young Researchers



**BioResources
& Technology**

3.-4.10.2024

**Czech University of Life Sciences Prague
Faculty of Tropical AgriSciences**



This year's sub-theme:
*"Resilience in the
Face of Global
Challenges"*



**Faculty of Tropical
AgriSciences**

Welcome to CZU – Czech University of Life Sciences Prague

MCYR - Multidisciplinary Conference for Young Researchers

Dear colleagues, Ladies and gentlemen, esteemed guests, fellow scholars, and especially Early Career Researchers,

I am truly honoured to have you here as we gather for the **5th Multidisciplinary Conference for Young Researchers** (organized by the BRT, Faculty of Tropical AgriSciences) at the Czech University of Life Sciences Prague. 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 Czechia, 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 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 Prague's rich tapestry of history, culture, and academia.



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 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 you will carry forward in your academic and professional journeys.

Sincerely, on behalf of the Scientific Committee of MCYR,

Assoc. Prof. Dr. Hynek Roubík

Director of BioResources and Technology Division

Faculty of Tropical AgriSciences

Czech University of Life Sciences Prague

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General guidelines and practical information

Conference Format and Venue

The conference will be held as a **hybrid event**, allowing participants to join in person or online.

Location: The main programme will occur 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.

Link to virtual sessions: [Microsoft Teams](#), meeting ID: 322 511 585 406, access code: GiAWWW

On-site Navigation

Upon arrival at the Faculty of Tropical AgriSciences, you can navigate the building with the following room guide:

- Atrium: First floor
- Bistro: First floor
- Rooms 313 and 315: Third floor
- Room 401: Fourth floor

How to get to CZU

The basic reference point for making your way to the CZU campus is the Dejvická A metro station. After you make your way to the Dejvická station via any of the methods specified below, take bus number 107 (heading to Suchbát) or 147 (heading to Výhledy) and go to the "Zemědělská univerzita" stop. Here you will find the entrance gate to CZU.

Parking

Parking is available on the university campus. You can enter through the main gate, which has a sign for university guests.

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 using the MCYR PowerPoint Template and submit it via e-mail to 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, available for download on the MCYR website. 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 a short video presentation lasting 3 minutes. Submit your video presentation in .wmv or .mp4 format 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!

Program

Thursday, 3.10.2024

Place

9:00-9:30	Registration	Atrium
9:45-10:30	Opening Ceremony, Keynote Speech and Group Photo	Room 401
10:30-12:30	Session: Climate and Sustainability	Room 401
12:30-13:30	Lunch Break	Bistro
13:30-14:45	Session: Plants and Agriculture (I)	Room 313
14:45-15:30	Coffee Break and Opening of the Photo Exhibition: "The Beauty of the West African Savanna"	Bistro
15:30-18:00	Session: Technology and Innovation	Room 401
18:00	Networking Barbecue	Bistro

Space for your notes

Friday, 4.10.2024

Place

9:00 - 10:30	Session: In-Person Poster Presentations	Atrium
10:30 - 11:15	Coffee Break and Poster discussion	Atrium
11:15 - 12:30	Session: Animals and Ecology	Room 313
12:30 - 13:30	Lunch Break	Bistro
13:30-15:00	Session: Plants and Agriculture (II)	Room 401
15:00-15:30	Coffee break	Bistro
15:30-17:00	Session: Society and Culture	Room 313
17:00–19:00	Online Workshop	Bistro

Space for your notes

Keynote speech

From Curiosity to Impact: Charting Your Path as an Early-Career Researcher

"At the heart of every significant discovery is a question, a curiosity that drives us to explore the unknown. In the early stages of your career, your curiosity is your greatest asset," introduces the topic Assoc. Prof. Dr. Hynek Roubík – Director of BRT and Vice-dean for Science, Research and Doctoral Study.

In this keynote, Assoc. Prof. Dr. Hynek Roubík will address the unique challenges and opportunities that early-career researchers face as they are on their academic journeys. Focusing on the power of curiosity, he will talk about its role as the driving force behind research. He will discuss strategies for navigating the common obstacles of the early-career phase, including funding pressures, balancing professional and personal life, and the evolving nature of research in a multidisciplinary world.

He will highlight the importance of resilience, adaptability, and collaboration, encouraging young researchers to build strong networks, seeking mentorship, and searching for innovation. He will also talk about the significance of translating research into real-world impact, as well as sustainable work-life balance to ensure a long, fulfilling career.

"In a world where it's easy to focus on output—publications, grants, collaborations—I urge you to protect your curiosity. Follow your passion, ask the hard questions, and allow yourself to explore areas others might overlook." says Assoc. Prof. Dr. Hynek Roubík – Director of BRT and Vice-dean for Science, Research and Doctoral Study.

Opening of the Photo Exhibition: "The Beauty of the West African Savanna"

A **unique exhibition**, „Beauty of the West African Savannah“, will showcase the diversity of West African nature through 7x7 family photography. This exhibition will also highlight the importance of protecting endangered species such as the giant eland, the largest antelope in the world. The exhibition's opening will take place on **3 October 2024** in the lobby of the Faculty of Tropical Agriculture. The opening will be attended by Mgr. Lenka Pokorná, former Czech Ambassador to Senegal, and Mgr. Václav Prášil from the Ministry of Foreign Affairs of the Czech Republic.

The Entrance Hall of the Faculty of Tropical AgriSciences, ČZU Prague

Exhibition opening: 3:00 PM





Come to be inspired and discover the beauty of West African nature!



Detailed program of MCYR

Session: Climate and Sustainability


Chair: Assoc. Prof. Dr. Yelizaveta Chernysh, BRT Senior Researcher.

Public Management Mechanisms in Sustainable Development of Rural Areas in the Conditions of Socio-Environmental and Economic Losses Caused by the Russian-Ukrainian War	Tetyana Sokolska , Natalia Dubrova, Svitlana Polishchuk, Victor Kostenko	
Climate Smart Agricultural Practices Program at MVE Operational Areas: Case Studies of Atewa Forest & Wechau Hippo Sanctuary	Aminu Bonifacio	
Comprehensive Assessment of Surface Water Quality and Pollution Sources in Al-Muzaynah Dam Lake, Syria: Insights from Multivariate Statistical Analysis	Aliaa Gbilly , Tothmeresz Bela, Raed Jafar, Zaina Mayeya, Adel Awad	
Rise of the Pitahaya in the Philippines as a result of climate change	Tadeáš Hrušovský , Tomáš Lošák, Rhea Joy D. Flora	
Recycling Phosphogypsum into High-Value Bio-Products: Preliminary Findings	AbdulAzeez Shobajo , Viktoriia Chubur, Hynek Roubík, Yelizaveta Chernysh	
Digestate Application for Pellet Fuel Production	Roman Vaskin, Iryna Vaskina, Serhij Sudorenko, Marta Cieslik, Maksym Skudanenko, Dmytro Hopkalo	
Balance, logistics and economics of input raw materials in the supply chain of energy from renewable sources in transport	Miroslav Bažata , Petr Jevič, Tatiana Ivanova	
Sustainability Dimension of Road Network in Ilorin	Jamiu Alanla	
A critical review of structural equation modelling in dealing with unobservable variables with sustainable development goals	Tewodros Tarekegn , Hynek Roubik	

Session: Plants and Agriculture (I)



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

Factors Influencing Tree Use among Small Farmers of Gorkha District, Nepal: Livelihood Perspective	Mohan Krishna Chowdry Avilineni , Pablo Canton Perez, Mathew Gonzalo Tello Manzo, Boris Llamas Menchu, Abdelrahman Ali Ghazi Al-Salem, Bohdan Lojka, Sanjeeb Bhattarai	
Enhancing Crop Resilience Amidst Global Challenges: Reducing Leaf Nicotine Levels through NPK Fertilization and Potassium Sources from Muriate of Potash	Jacob Lisuma , Magdalena Ntatlwa, Rogath Kisoka	
Effects of Biological Seed Treatments on Pest Occurrence, Production Parameters and Yield of Pea (<i>Pisum sativum</i> L.) in Organic Farming	Thi Giang Nguyen , Petr Konvalina, Trong Nghia Hoang, Marek Kopecký, Kristýna Perná	
The Influence of Resource-Saving Soybean Cultivation Technology on the Phytopathological State of the Soil	Antonina Panfilova , Alena-Mariia Tarabrina	

The Impact of the War on the Agriculture of Ukraine: the Scale of Social, Ecological and Economic Losses	Olena Kotykova , Mykola Babych, Bohdan Babych	
The Hardness of Fallow and Arable Chernozem in Spring	Yurii Dehtiarov , Zinaida Dehtiarova	
The Influence of Biological Preparations on the Productivity of Corn Hybrids in the Conditions of Southern Ukraine	Antonina Panfilova, Artem Kvasko	
Production of High Ricinoleic Acid in Ricinus Communis by Gene Editing	Paula A. Figueroa-Varela , Eduardo Duque-Dussán, Diego F. Villanueva-Mejía	

Session: Technology and Innovation

Chair: Ing. Chama Theodore Ketuama, BRT Junior Researcher; PhD student

Bridging the Agricultural Knowledge Gap: Fine-Tuning LLama3 for Farm Management Assistance	Adam Hruška	
A call for modernisation of science, the case of anaerobic digestion: a scoping review	Antoine Bercy , Hynek Roubík	
AI-Driven Educational Tools: Transforming Biology Education through Generative Neural Networks	Petra Bumberová , Adam Hruška, Ondřej Zahradníček, Veronika Šilhavá, Jan Mourek	
The Role of Artificial Intelligence in Evolving Global Leadership Concepts"	Inna Balahurovska	
Technological Innovations and Health Care	Oscar Araque , Luz Adriana Sanchez-Echeverri, Maria Restrepo	
Reduction of Negative Air Ion Concentration Depending on the Location of the Ionizer in the Vehicle Interior	František Paur	
Computational Fluid Dynamic Analysis of Air Vortex Generation by Vehicular Traffic for Wind Energy System Applications	Carlos A. Ibarra, Hecto A. Tinoco , Sara Restrepo-Valencia	
Development and Analysis of Lightweight Three-Dimensional Woven Jute/Glass Hybrid Composites with Enhanced Acoustic Insulation Properties	Shabnam Nazari , Tatiana Alexiou Ivanova, Rajesh Kumar Mishra	
Comparison of biogas production rate when mixing cow manure with food waste or cow manure with Poultry waste at the optimal mixing ratios	Kinda Ali , Read Jafer, Adel Awad, Hussam Saboh	
Effective Policy Approaches for Promoting Biogas Technology Dissemination. Case for Uganda	Phiona Jackline Mukisa , Hynek Roubík	
Effects of Torrefaction on Biomass and Solid Biofuel Properties	Musa Bappah , Tatiana Alexiou Ivanova	
Liquid Phase of Digestate Treatment Causing More Effective Utilization of Nutrients	Manvendra Kumar , Hynek Roubík	
Design and Evaluation of a Seeder and Fertilizer Applicator for a Combustion-Powered Walking Tractor	Diana L. Cardona, Hecto A. Tinoco , Jeiner Moreno, Dairon J. Marulanda, Jaime Buitrago-Osorio	
Evaluating Coffee Trunks as Sustainable Biofuel for Coffee Drying Processes	Eduardo Duque-Dussán , Juan Rodrigo Sanz-Uribe	
Enhancing Efficiency and Profitability in Colombian Coffee Processing through Solar Energy and Integrated Sustainable Practices	Álvaro Guerrero-Aguirre , Juan Rodrigo Sanz-Uribe	
Dehydration Kinetics of Cassava Tubers: Enhancing Solar Drying Efficiency and Product Quality	Ellyas Alga Nainggolan , Klára Urbanová	

Session: In-Person Poster Presentations

Society and Culture	Importance of Stakeholder Mapping in Implementing Gender Equality Plans, Case Study of AGRIGEP Universities	Jana Mazancová, Štefan Bojnec, Jakub Husák , Barbora Fišerová, Julianna Kolobak
	Interior Green Walls: Perception of the People with Daily Contact	Ivana Karberová, Helena Lorencová , Tadeáš Hrušovský
	Public Perception of Extreme Weather Events and Climate Change	Helena Lorencová , Ilona Votavova, Ivana Karberová
	National and Cultural Identity in Mass Media: How to Resist Manipulations and Hate Speech	Oksana Sakhatska
Plants and Agriculture	Influence of Elevated Climate Conditions on the Plant Virus in Brassica Napus	Archita Sahu , Emad Ibrahim, Rohit Bharti, Jiban Kumar Kundu
	Crop Residue Management and Utilization for Soil and Environmental Applications: A First Rate Biocatalyst for Clean Environment	Sadia Babar Baloch , Shahzaib Ali, Jaroslav Bernas, Petr Konvalina, Adnan Mustafa
	Implementation of Sorghum in Pasta Products	Enemona Greg Ademu , Regine Schönlechner, Lisa-Maria Call, Gemaima Evangelista, Lucie Jurkaninová
	Tropical Roots and Tuber Plants on Local Markets in the Peruvian Amazon	Goldis Perry Davila , Zbyněk Polesný, Lady Laura Tuisima Coral, Andrea Irene Bosmediano Oliveira, Robert Juda Rabanal Gonzales
	Determinants of Soybean Adoption by Smallholder Farmers in Kenya	Francis Mucira Murage , Miroslava Bavorová
	Local Knowledge, Management, and Production Challenges Associated with Drumstick Tree (Moringa oleifera Lam.) in Kenya	Boniface Mwami , Zbynek Polesny, Alice Muchugi, Prasad Hendre
	Adoption of Improved Buffalo Breeds in Nepal: Impact on Milk Production, Sale and Consumption	Namdev Upadhyay , Miroslava Bavorova, Nils Teufel, Krishna Prasad Timsina, Giri Prasad Kandel
	Development of an in Vitro Propagation Protocol for Oca (Oxalis tuberosa Molina), an Andean Tuber Crop	Barbora Šírová , Ing. Martin Smetana, Iva Viehmannová
Animals and Ecology	Development and Testing of LAMP Assays for Detection of African Swine Fever Virus	Allan Obonyom Tekkara , Jiří Černý
	Formation of Useful Traits in Animals of the Ukrainian Black-and-White Dairy Breed by Absorptive Crossing	Olha Kruhliak , Andrii Kruhliak, Tetiana Kruhliak
Technology and Innovation	Assessment of Usability and Ergonomic Design of Luggage Compartments in Passenger Cars: Dimensions, Health, and Safety Considerations	Jakub Povýšil , Michal Hruška
	Characterization of Biochar Produced from Biogas Digestate: A Case Study from Vietnam	Van Hau Duong , Le Dinh Phung, Hynek Roubík
Climate and Sustainability	Adoption of Technologies to Increase the Resilience of Smallholder Farmers in Zambia	Lutangu Andrew Litia , Miroslava Bavorová
	Farmers' Resilience and Adaptation Practices in Multi-Disaster Context: A Case Study of Indonesia	Yosephine Avi Ayu Rembulan , Miroslava Bavorova

Session 4: Online Poster Presentations

Society and Culture	The Impact of Covid-19 on Market Structure in the U.S. passenger air transportation Sector	Abigail MacLean , Zoe Laulederkind
	Determinants of Digital Financial Inclusion Among Young Entrepreneurs in Informal Sector: Evidence from Ghana	Bernard Kwamena Cobbina Essel , Miroslava Bavorova
	Exploring the Drivers and Impacts of CSR Practices in the Food Business Sector	Bernard Kwamena Cobbina Essel , Miroslava Bavorova
	Problematic Aspects of Reintegration of Veterans from Military Service Into Civilian Life	Yaryna Tanchak , Iryna Snovydyvych
	The War Impact on Social Capital and Resilience: the Case of Ukraine	Andreas Ponderfer, Georg Hoch, Viktoriia Shkola
Plants and Agriculture	Study of the Influence of Biofertilizers on the Productivity of Corn for Grain in the Conditions of the Sumy Region (Ukraine)	Oksana Datsko , Subota Vladyslav, Li Xue
	Influence of Foliar Treatment on Maize Yield	Vitalii Yatsenko , Oksana Datsko
	Disease Resistance of Corn Hybrids Using No-Till Cultivation Technology in the Conditions of Southern Ukraine	Anna Tereshchenko
	Determination of Background Concentrations of Heavy Metals in the Soils of the Sumy Region	Oksana Datsko , Vladyslav Padalka, Vladyslav Mosh
	Substantiation of the Organic-Oriented Model for Agricultural Production: A Case Study of the Ukrainian Forest-Steppe	Sergii Kudria , Nadiia Kudria, Yurii Tarariko, Yelizaveta Chernysh, Viktoriia Chubur
Animals and Ecology	Novel Chicken Explant Model for Ethical Research Practices	Zuzana Kiššová , Viera Karaffová, Dagmar Mudroňová, Patrik Tráj, Gábor Mátis
	Prevalence of Malassezia spp. in Dermatologically Diseased Dogs in Slovakia	Zuzana Malinovská , Eva Čonková, Peter Vácz
	Quantitative Determination of Deoxynivalenol in Dry Dog Food	Michaela Harčárová
	The Impact of Supplementing Plant Tannin on the Milk Yield and Milk Quality of Lactating Dairy Cows	Svetlana Malyugina, Andrea Staffa
	Human – Wildlife Conflict in Wondogenet College of Forestry and Natural Resources, Ethiopia	Melese Merewa Reta
	Preparation of Epididymal Boar Sperm for Artificial Insemination	Oksana Lyzohub , Oksana Shcherbak, Svitlana Kovtun, Petro Trotskyi
	Biological Methods of Processing Organic Waste as Sustainable Raw Materials with Increased Disinfection Efficiency	Olexandra Boyko , Victor Brygadyrenko, Yelizaveta Chernysh, Viktoriia Chubur, Hynek Roubik
Technology and Innovation	Increasing the Durability of Working Tools of Agricultural Robots	Olha Sumiatina , Oleksii Derkach
	The Shift in Allergy-Related Search Language in Ukraine: Impact of War on Public Access to Pollen Forecasts	Tetiana Kuchenko , Victoria Rodinkova
	Supporting sustainable development and food security through innovative solutions	Roman Ostapenko

Climate and Sustainability	Life Cycle Assessment: A Case Study of Moringa Oleifera Oil Production in Colombia	Ivonne Ceron , Miguel Godino
	Environmental aspects of drilling waste disposal	Idrees Hammoody Ahmed, Roman Vaskin, Leonid Plyacuk, Serhii Sydorenko, Yevhen Bataltsev, Dmytro Matiukha
	Conversion of digestate into organo-mineral fertilizers	Dmytro Matiukha , Roman Vaskin, Irina Vaskina, Serhii Sydorenko, Maksym Skydanenko
	Shifts in Tree Pollen Seasons may Impact Allergy Exacerbations in Central Ukraine	Maryna Yasniuk , Victoria Rodinkova
	Lengthened Poaceae Pollen Season Highlights the Extended Risk of Seasonal Allergy in Central Ukraine	Olha Kaminska , Victoria Rodinkova

Space for your notes

Session: Animals and Ecology

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

Genetic Diversity of Locally Adapted Turkey in Nigeria Using Mitochondrial DNA	Bamidele Durojaiye , Ibifiri Briggs, Martha Bemji, Abdur-Rahman Abdullah	
Occurrence of <i>Borrelia burgdorferi</i> Sensu Lato in Small Wild Mammals Around a Municipal Waste Landfill	Edita Kozlíková , Eva Bártová	
Dietary <i>Bacillus</i> Species Modulate Lipid Metabolism-Related Parameters, Growth, Water Quality, and Bacterial Load in Nile Tilapia (<i>Oreochromis Niloticus</i>)	Salma Atef, Omaima M. Ahmed, Mohamed Mohamed Said, Haitham G. Abo-Al-Ela	
The Effect of Immunocastration and Amino Acid Supplementation on Meat Quality of Farmed Fallow Deer (<i>Dama Dama</i>)	Thoniso Chitambala , Veit Ny, Daniel Bureš, Luděk Bartoň, Francisco Ceacero, Radim Kotrba, Nicole Lebedová, Tersia Kokošková	
The Impact of the Destruction of the Kakhovka Hydroelectric Power Station Dam on the Biodiversity of the Lower Dnieper	Andrii Sydorenko	
Where Sand Meets Water: the Potential of Extensive Aquaculture in the Western Province of Zambia	Jan Staš , Miloslav Petrtýl, Vladimír Verner, Hynek Roubík	

Session: Plants and Agriculture (II)

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

Cultivating Resilience: <i>Cistus ladanifer</i> L. Growth on Marginal Lands	Veronika Chaloupková , Marina Sanz, Luis Saúl Esteban, Irene Mediavilla	
Productivity of Seed Pea Varieties in Conditions of Southern Ukraine	Oleksandr Mytnyk, Andrii Brahin	
Evaluation of Changes in Electrophysical Parameters of Typical Chernozems During Strawberry Cultivation	Yurii Dehtiarov	
Characterisation, Development, and Efficacy of Wild <i>Metarhizium</i> Strains	David Sandala , Andrea Bohata, Jana Lencova, Rost Micheal, Jan Barta	
Morphobiological Features and Productivity of Essential Oil Plants of the Lamiaceae Family in the Conditions of the Southern Steppe of Ukraine	Tetiana Manushkina, Mykola Manushkin , Ruslan Koval	
Optimization of Green Microwave-Assisted Extraction Method for <i>Cistus ladanifer</i> L. Essential Oil	Veronika Chaloupková , Irene Mediavilla	
Eco-Innovative Extraction of Bioactive Compounds from Olive Pomace for Industrial Valorization	Lynda Gueroub , Ouahiba Soufi, Linda Ouldsaadi	
Genetic Evaluation of M4 Population of Pigeon pea (<i>Cajanus cajan</i>(L.) Millsp.) through Molecular Markers	Shraddha Dhamore	
Enhancing Sustainability in the Coffee Supply Chain: Applying Controlled-Second Fermentation and Integrating Bioenergy Generation Using Dark Fermentation	Jayen Aris Kriswantoro , Pingkan Aditiawati, Intan Taufik, Chen Yeon Chu, Nizar Happyana	
Cocoa-based Family Farming Systems in Ecuador	Malena Torres-Ulloa , Patrick van Damme, Vladimir Verner, Omar Ruiz Barzola, Maria Jimenez Feijoó	

Session: Society and Culture

Chair: Ing. Charles Ogbu, BRT Junior Researcher; PhD student

War-induced Migration and its Impact on the Ukrainian Agriculture	Ruslana Zadorozhna, Tetiana Stepanova	
The Impact of the 2011 War on the Reality of Food Security in Syria	Ghaith Ali, Sliman Moualla , Rand Jnaid	
Understanding the Stampedes over the Years in India: Lesson and Learning	Rupak Kumar	
Gender Accents in the Economic Life of the Ukrainian Village in the 1920s	Anastasiia Lapchenko	
Human-wildlife Interactions: Cultural Perspectives and Sensitivities Influence Conservation Efforts for the Philippine Brown Deer (<i>Rusa marianna</i> Desmarest, 1822)	Jhonnell Villegas , Jayson Ibañez, Francisco Ceacero	
Sustainable Exploitation of Natural Resources in Africa: the Likely Role of Religious Beliefs	Hilaire Nkengfack , Hervé Kaffo Fotio	
Understanding the Experience of Water Pollution and Climate Change among Urban Residents in China: A Mixed Methods Approach	Veronika Vaseková	
Climate Impacts on Barley Cultivation and Production in Syria	Ghaith Ali, Sliman Moualla , Rand Jnaid	
Arrhythmias and Conduction Disturbances in Patients with Primary Systemic Vasculitides	Anna Balian	

Space for your notes

Online Workshop

Techniques for Extraction and Analysis of Bioactive Compounds

Organiser: Lynda Guerboub, University of Bejaia, Algeria

Time: 17:00–19:00 (Online Workshop), 04.10.2024

Platform: Microsoft Teams, meeting ID: 322 511 585 406, access code: GiAWWW

Workshop Overview:

The workshop offers a comprehensive exploration of methods for extracting and analyzing bioactive compounds from olive pomace. With a focus on practical techniques and innovative applications, participants will delve into the chemical composition of olive pomace and discover a variety of extraction methods, including solvent extraction, ultrasonic, and microwave-assisted techniques.

The workshop will feature live demonstrations of extraction processes and analytical methods such as HPLC (High-Performance Liquid Chromatography) and GC-MS (Gas Chromatography-Mass Spectrometry), showcasing how these technologies can be applied to extract valuable bioactive compounds.

Scientific Committee

Assoc. Prof. Dr. **Hynek Roubík**

Head of the Scientific Committee
Czech University of Life Sciences Prague, Prague, Czech Republic

Assoc. Prof. Dr. **Yelizaveta Chernysh**

Sumy State University, Sumy, Ukraine;
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Prof. **Mykola Kharytonov**

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Assoc. Prof. **Oleksandr Kubatko**

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Prof. **Le Dinh Phung**

University of Agriculture and Forestry, Hue University, Hue city, Vietnam

Dr. **Nils Haneklaus**

Universität für Weiterbildung Krems, Krems an der Donau, Austria;
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Delta University for Science and Technology, Al-Dakahlia, Egypt

Dr. **Raed Jafar**

Tishreen University, Latakia, Syria

Dr. **Viktoriiia Chubur**

Czech University of Life Sciences Prague, Prague, Czech Republic

Organizing Committee

Head of the Organizing Committee

Viktoriiia Chubur

Organizing Committee Members

Jan Staš

Marek Jelínek

Stacy Hammond

Masha Gulak

Organizational Support

Antoine Bercy

Tewodros Tarekegn Lapiso

Hidayatul Fitri

Adam Hruška

AbdulAzeez Shobajo

Chama Theodore Ketuama

Hau Van Duong

Charles Ogbu

Manvendra Kumar

Yelizaveta Chernysh

Hynek Roubík

Book of Abstracts

Excited about the Book of Abstracts?

It is coming out soon!

We hope that the **Book of Abstracts** from the **MCYR** will serve you as a rich reservoir of cutting-edge research and ideas, encapsulating the collective intellectual prowess of emerging scholars from diverse fields. Within its pages, you will go on a journey through various topics, gaining insight into many fields.

The final version of the Book of Abstracts and the ISBN will be available through the MCYR website after the conference. Only the presented contributions will be incorporated in the final Book of Abstracts.

You can now access the preliminary Book of Abstracts online through the QR CODE:



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**

Conference hosts



About The Czech University of Life Sciences Prague

The Czech University of Life Sciences Prague (CZU) is one of the leading European institutions in 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 biodiversity conservation, along with the responsible use of natural resources and alternative, renewable energy production.

CZU Prague is situated on the outskirts of Prague, on a quiet and well-equipped campus easily accessible 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, travelling to 27 European countries to study for a semester or one academic year at over 200 universities throughout Europe.



About the 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 faculty's mission is to provide higher education to foreign and Czech students in 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 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 the BioResources & Technology Division

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 broad spectrum of activities encompasses research, development, implementation, project coordination, and communication and dissemination services. Our multidisciplinary approach allows us to address complex environmental challenges and contribute to sustainable development on a global scale. Together, we strive to share our knowledge, uphold the highest research quality standards, execute impactful projects, and celebrate the remarkable individuals who make our work possible. We invite you to join us on our journey towards a sustainable future.

The BRT focus areas:

Feedstock diversity and optimization: BRT investigates 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 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. BRT investigates novel reactor configurations, such as membrane-based and two-phase systems, and new techniques for nutrient and pH control.

Biogas utilization and storage: Once biogas is produced, it must be stored and utilized efficiently and effectively. BRT 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 the environmental and social impacts of this technology. BRT 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. BRT investigates the technical and economic feasibility of these integration strategies, as well as the policy and regulatory frameworks needed to support them.

Overall, there are many exciting opportunities for BRT is to contribute to the development and implementation of this promising renewable energy source.

An inseparable part of work of BRT is waste management research.

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, as well as the generation of energy from waste.

Technological Innovation: Waste management research is also focusing on the development of 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 kept in use 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 through the redesign of products and business models.

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

Overall, activities of BioResources & Technology and waste management research is driven by a combination of technological innovation, environmental sustainability, and social and behavioral factors. As waste management becomes an increasingly pressing issue in many parts of the world, there is likely to be growing investment in research and innovation in this area.



Highlighting interesting projects

Delve into some of the BRT's projects, which we believe could be of interest to you.

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.



siris



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



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

The platform aims to strengthen the capacities and cooperation of young teachers, researchers and masters and doctoral students at selected Ukrainian universities by creating a platform – AgriSciences Platform for sharing information on Agrarian Sciences.

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.

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



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

Biodiversity protection and restoration are critical for maintaining the ecological balance and ensuring the planet's sustainability. In the absence of sustainable management and protection of natural resources, the negative impacts of climate change and other environmental issues will only increase.

Private investment can be a critical tool that has potential to play a transformative role in financing conservation and restoration efforts, as public financing alone may be insufficient to address the scale of these challenges.

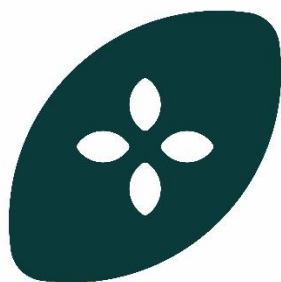
By activating innovative sustainable finance solutions and incorporating technological advances within the field of geospatial analytics, private investment can be leveraged in a way that benefits the environment and secures investors' confidence.

BIO-CAPITAL is going to implement an interdisciplinary research and innovation endeavour by combining actions in the three fields of (i) biodiversity protection and restoration, (ii) biodiversity-friendly financing mechanisms and (iii) advanced space technology. The implementation will involve three key steps to leverage innovation.

- BIO-CAPITAL will analyse, understand and learn from use cases.
- BIO-CAPITAL will elaborate, monitor, and demonstrate through use case.
- BIO-CAPITAL will co-develop, implement and amplify back to the use cases.
- BIO-CAPITAL will engage stakeholders, in order to reach shared views on the aforementioned three stages and how they can be effectively combined to increase 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.



**bio
capital**

