

8th
ISCW

MATE
HUNGARIAN UNIVERSITY OF
AGRICULTURE AND LIFE SCIENCES




**POLITECHNIKA
BYDGOSKA**
im. Jana i Jędrzeja Śniadeckich

Conference Program

**8th International Scientific Conference
on Water**

20-21 March 2025
Szarvas, Hungary



Thursday, March 20, 2025	
9.00 – 10.00	Registration
Plenary session Moderator: Mihály Jancsó	
10.00 – 10.20	Opening ceremonies
10.20 – 11.00	Reinhard Nolz: Agricultural water management research from the lysimeter scale to the field scale
11.00 – 11.40	Tibor Bíró: Improving the water management of the Danube-Tisza Interfluve
11.40 – 12.20	Patricia Ann J. Sanchez: Water Resources and Climate Change in the Philippines
12.30 – 14.00	Conference photo Lunch break and Poster Session (MATE Conference Center)
Scientific session – Regional scale and remote sensing (MATE Conference Center) Moderator: István Waltner	
14.00 – 14.20	Angura Louis, Zsolt Zoltán Fehér, Tamás János, Attila Nagy: SUPPORTING WATER RESOURCE DECISION MAKING THROUGH LAND COVER MAPPING ON A REGIONAL LANDSCAPE
14.20 – 14.40	Balázs Kajári, Norbert Túri, János Körösparti, Csaba Bozán: ANALYSIS OF INLAND EXCESS WATER DURABILITY USING SENTINEL SATELLITE IMAGES BASED ON INLAND EXCESS WATER FREQUENCY MAPS GENERATED BY CONVOLUTIONAL NEURAL NETWORKS
14.40 – 15.00	Dávid Pásztor, Zsolt Fehér, Attila Nagy, János Tamás: HYDROMORPHOLOGICAL ASSESSMENT AND DYNAMIC WATER BALANCE MODELING OF RESERVOIRS
15.00 – 15.20	Nxumalo Gift Siphwe, Zsolt Feher, Tamás Janos, Ulubek Burganakov, Nagy Attila: ADVANCING AGRICULTURAL WATER REGIME USING SAR TECHNOLOGY: SOIL MOISTURE AND ETC ESTIMATION FOR SUSTAINABLE CROP PRODUCTION
15.20 – 15.40	György Kerezi: AUTOMATED VEGETATION INDEX CALCULATION FOR LYSIMETER MONITORING USING A SIMPLIFIED PYTHON SCRIPT
Scientific session – Plant physiology and water (MATE ÖVKI Demonstration Center) Moderator: József Zsembeli	
14.00 – 14.20	Béla Gombos, Ildikó Szalókiné Zima: EXTREME DROUGHT IN SZARVAS REGION IN 2022
14.20 – 14.40	Patricia Tarkanyi, Mihaela Lăcătuș, Georgeta Sofia Popescu, Laura Rădulescu, Liana Maria Alda, Ersilia Alexa, Adrian Riviș, Luminița Pîrvulescu, Iuliana-Corina Megyesi, Bordean Despina-Maria: INFLUENCE OF TEMPERATURE AND RAINFALL ON THE NETTLE PLANT MOISTURE CONTENT
14.40 – 15.00	Mihaela Lăcătuș, Patricia Tarkanyi, Aurica Breica Borozan, Georgeta Sofia Popescu, Laura Rădulescu, Liana Maria Alda, Atena-Mariana Poiană, Diana Moigrădean, Ioan Ladislav Caba, Bordean Despina-Maria: WATER AS AN ESSENTIAL FACTOR IN THE DEVELOPMENT OF FOOD PRODUCTS FROM AMARANTHUS RETROFLEXUS AND CHENOPODIUM ALBUM
15.00 – 15.20	Viktor Vincze, Mihály Jancsó, Árpád Székely, Ildikó Kolozsvári, Zoltán Futó: THE IMPACT OF TILLAGE ON SOYBEAN GROWTH DYNAMICS AND POD PRODUCTION
15.20 – 15.40	Mohammadreza Ojani, Issa Loghmanieh, Eisa Ebrahimi, Azin Rooien, László Bertalan: COMPARATIVE ANALYSIS OF PHOSPHORUS FERTILIZER EFFECTS ON ZINC CONCENTRATIONS IN SOIL AND WHEAT UPTAKE UNDER IRRIGATED AND RAINFED CONDITIONS

15.40 – 16.10	Coffee break and Poster Session (MATE Conference Center)
Scientific session – Water Quality (MATE Conference Center) Moderator: Béla Gombos	
16.10 – 16.30	Mohammadreza Ojani, Mehdi Ghajar Sepanlou, Mohammad Ali Bahmanyar, Majid Danesh, Zeynab Kougir Chegini, Negin Sheykhi Gerakouei, Szabo Szilard: INVESTIGATION OF TEMPORAL AND SPATIAL CHANGES OF NITROGEN POLLUTION IN DRAINAGE OF LANDS WITH DIFFERENT LAND-USES IN SHIROOD CATCHMENT LOCATED IN MAZANDARAN PROVINCE
16.30 – 16.50	Aderemi I.A., Okeola O.G., Mahmud H.O., Abdulkadir T.S., Salami H.A., Salami A.W.: HARNESSING INTERNET OF THINGS (IOT) AND ADVANCED ANALYTICS FOR SUSTAINABLE WATER QUALITY MANAGEMENT
16.50 – 17.10	Sándor Kun, Imre Boczonádi, János Tamás, Attila Nagy: INFLUENCE OF INTENSE RAINFALL ON THE WATER QUALITY AND MICROBIAL CHARACTERISTICS OF AN URBAN STREAM
17.10 – 17.30	Andreea Ardelean, Bianca-Denisa Chereji, Florentina-Daniela Munteanu: THE ENVIRONMENTAL IMPACT OF THE PRESENCE OF PSYCHOACTIVE SUBSTANCES
17.30 – 17.50	Florent Demelezi, Yohannes Gebregziabhir, Mihaly Jancso, Zoltan Vekerdy: EVALUATION OF CROP GROWTH PERFORMANCE OF WINTER WHEAT AND MAIZE IN HUNGARIAN CLIMATIC CONDITIONS AND WATER STRESS
Scientific session – Ecosystems and services, water management (MATE ÖVKI Demonstration Center) Moderator: Norbert Túri	
16.10 – 16.30	Priya Sharma, Gergő Gyalog, Mónika Varga: ECONOMIC VALUATION OF THE MULTIPLE BENEFITS OF FISHPONDS
16.30 – 16.50	Erzsébet Csengeri: THE CHANGE OF WETLAND ECOSYSTEM SERVICES IN BEKES COUNTY
16.50 – 17.10	Norbert Túri, Balázs Kajári, János Körösparti, Csaba Bozán: "WHERE COULD THE PRACTICE OF SUBSURFACE DRAINAGE STAND IN HUNGARY? AN OVERVIEW OF THE INTERNATIONAL STATUS OF TILE DRAINAGE APPLICATION AND RESEARCH
17.10 – 17.30	Douraid Guizani, János Tamás, Attila Nagy: SUSTAINABLE URBAN DEVELOPMENT IN DEBRECEN: ADDRESSING WATER SCARCITY, AGRICULTURAL DECLINE, AND INDUSTRIAL EXPANSION THROUGH COMMUNITY-BASED HYDROPONIC SOLUTIONS
17.30 – 17.50	Zibuyile Dlamini, Ágnes Kun, Bela Gombos: COMPARISON OF QUALITY PARAMETERS IN IRRIGATED AND RAIN-FED MAIZE (ZEA MAYS L.): A CASE STUDY IN SZARVAS, HUNGARY
18.00 – 21.00	Closing remarks Gala dinner (MATE Conference Center)

Friday, March 21, 2025	
10.00 – 12.00	Guided field visit (optional) – MATE ÖVKI Lysimeter Station
	MATE HAKI Indoor aquaculture systems and fish ponds

For more information visit: <https://iscw.hu/>

Poster session

- Malek Abidli, István Waltner, Ágota Horel:** INVESTIGATING THE INTERCEPTION EFFECT OF SELECTED PERMEABLE SOIL COVERING MATERIALS
- Tabita Adamov, Tiberiu Iancu, Elena Pet, Anda Milin, Cosmin Salasan, Ramona Ciolac, Camelia Mănescu, Marius Gordan, Dragoş Chende:** HOW AI CAN BE THE SOLUTION TO AGRICULTURAL PROBLEMS
- Gábor Bencze, Roland Hudák:** EFFECT OF NUTRIENT MANAGEMENT AND IRRIGATION ON WINTER WHEAT YIELD
- Károly Bodnár, Erika Skobrák Bodnár:** DATA ON THE WATER REQUIREMENTS OF FARM ANIMALS
- Boglárka Bozóki, Gergő Péter Kovács, Csaba Gyuricza:** THE IMPACT OF TILLAGE METHODS ON SOIL WATER CONTENT IN GREEN PEA (*PISUM SATIVUM* L.)
- Brad Ioan, Camelia Mănescu, Cosmina Toader, Andrea Feher, Remus Gherman, Firu Adrian:** RESEARCHES ON THE IMPORTANCE OF AGRICULTURE IN THE ROMANIAN ECONOMY
- Bianca-Denisa Chereji, Florentina-Daniela Munteanu:** FROM WASTE TO WELLNESS – SHEEP WOOL A REMEDY FOR INDOOR AIR QUALITY
- Péter Czomba, Zoltán Túri, Gábor Molnár, Róbert Vass:** AIRBORNE LIDAR-BASED VOLUME DETERMINATION AND WATER RETENTION CAPACITY ESTIMATION OF FLUVIAL OXBOW LAKES
- Iva Ćurić, Ernis Saračević, Jörg Krampe, Norbert Kreuzinger, Heidemarie Schaar, Davor Dolar:** HYBRID SOLUTIONS: ULTRAFILTRATION AND REVERSE OSMOSIS FOR ELIMINATING PFBA AND PFOA FROM TEXTILE WASTEWATER
- Daniel Dicu, Radu Bertici, Mihai Herbei, Adina Horablaga, Cosmin Popescu, Laura Smuleac, Adrian Smuleac, Raul Pascalau:** RELOCATION AND RECONFIGURATION OF A DRAINAGE CHANNEL IN TIMIŞOARA, ROMANIA
- Katalin Fatér, István Waltner:** WATER FOOTPRINT ESTIMATION FOR SELECTED MAJOR CROPS IN HUNGARY
- Yohannes Gebregziabhir, Florent Demelezi, Zoltán Vekerdy:** A REVIEW OF CROP WATER STRESS ASSESSMENT USING REMOTE SENSING TECHNIQUES
- Roland Hudák, Gábor Bencze:** THE EFFECT OF DIFFERENT IRRIGATION LEVELS AND DROUGHT STRESS ON SORGHUM
- Kántor M., Gécz G., Horváth M.K.:** APPLICATION OF REDOX POTENTIAL IN WATER QUALITY ASSESSMENT
- Ildikó Kolozsvári, Ágnes Kun, Noémi Valkovszki, Gergő Péter Kovács, Csaba Gyuricza:** MAGNESIUM CONCENTRATION IN PLANT PARTS OF SORGHUM SILAGE IRRIGATED WITH HIGH-SALINITY EFFLUENT UNDER DIFFERENT TREATMENTS
- Zeynab Kougir Chegini, Dariush Zayyeni, Mohammadreza Ojani, Szilárd Szabó:** A BIBLIOMETRIC ANALYSIS OF LITERATURE ON THE WASTEWATER MANAGEMENT ALONGSIDE OF BIOENERGY PRODUCTION
- János Körösparti, Norbert Túri, Balázs Kajári, Csaba Bozán:** DESIGNATION OF AGRICULTURAL RESERVOIR AREAS USING GIS-BASED SPATIAL PLANNING TOOLS
- Patrik Krizsán, Gábor Bencze, Ildikó Kolozsvári:** THE EFFECT OF FOLIAR FERTILIZATION ON INCREASING OIL CONTENT IN WINTER OILSEED RAPE (*BRASSICA NAPUS* L.) CULTIVATION IN THE CASE OF A DRY SEASON

Camelia Mănescu, Tiberiu Iancu, Nicoleta Mateoc-Sîrb, Elena Peț, Ioan Brad, Tabita Adamov, Oana Sicoe-Murg, Dragoș Chende: THE CONTRIBUTION OF TOURISM TO THE SUSTAINABLE DEVELOPMENT OF RURAL AREAS. CASE STUDY – RELIGIOUS TOURISM IN THE NORTH-EAST REGION

Milin Ioana Anda, Țigan Eugenia, Merce Iuliana Ioana, Rujescu Ciprian Ioan, Chende Dragos Ciprian: AVAILABILITY AND SUSTAINABLE WATER MANAGEMENT IN ROMANIA

Pascalau Raul, Cosmin Alin Popescu, Imbrea Florinel, Nita Simona, Laura Iosefina Smuleac, Adrian Smuleac, Cosmin Salasan: THE IMPORTANCE OF NEW TECHNOLOGY IN WATER IRRIGATION SYSTEMS FOR MODERN AGRICULTURE

Georgeta Sofia Popescu, Ariana Bianca Velciov, Patricia Tarkanyi, Antoanela Cozma, Lia Sanda Rotariu, Despina Bordean: MOISTURE IN SOME FRUITS: NUTRITIONAL IMPLICATION

Cosmin Salasan, Carmen Simona Dumitrescu, Cosmina Toader, Tabita Adamov, Cristian Gaina, Raul Pascalau: SOCIOECONOMIC AND DEMOGRAPHIC DYNAMICS IN ARAD COUNTY AND THE WESTERN REGION OF ROMANIA: CHALLENGES, OPPORTUNITIES, AND POLICY IMPLICATIONS

Anka Roxana Pascariu, Iancu Mihaela, Chende Dragoș, Gordan Marius, Iosim Iasmina, Mănescu Camelis, Ramona Ciolac, Adamov Tabita, Tiberiu Iancu: EFFECTIVE COMMUNICATION STRATEGIES FOR WATER RESOURCE MANAGEMENT: BRIDGING SCIENCE AND PUBLIC AWARENESS

Smuleac Laura, Imbrea Florin, Horablaga Adina, Smuleac Adrian, Pascalau Raul, Bertici Radu, Dicu Daniel: THE ROLE OF WATER MANAGEMENT IN CLIMATE CHANGE ADAPTATION

Stanivuk Jelena, Pinter Zsolt, Gyalog Gergő, Ljubobratović Uroš, Nagy Zoltán: DOES WATER SCARCITY DRIVE POND AQUACULTURE TOWARD INTENSIFICATION?

Mohamed Yassine Zaghdoudi, Zoltán Vekerdy: EARTH OBSERVATION TECHNIQUES FOR OPTIMAL IRRIGATION MANAGEMENT

Barbara Viola, János Grósz Gábor Ernő Halupka: CHANGES IN LAND USE SUPPORTING SUSTAINABILITY IN THE IPEL'/IPOLY BASIN BETWEEN 1990 AND 2018