



Xth. International Symposium-2026

Scientific Program

of

The X. International Annual Symposium 2026

on

Environmental Health & Biosecurity: Sciences, Engineering & Applications

online

during **May 07 - 08, 2026**
Budapest – Hungary

with

Workshop Special Session:

**No Security Without Climate Security
Environmental Health & Climatic Change
(*Ecosystem Restoration for Climate Change Mitigation:
Processes, Practices, & Co-Benefits*)**



Xth. International Symposium-2026

Acknowledgment

The X. Symposium-2026 provided a platform for all the participants to voice their opinions & concerns as well as promoting discussions for collaborate in future. Environmental systems are all around us & closely connected to us: ecosystems, food systems, water systems & more. When they deteriorate, it is typically not a simple & predictable process. Rather, the environmental instability slowly builds until suddenly a tipping point is reached & the ecosystem changes fundamentally or even collapses, with potentially catastrophic impacts. After a great successful of the last IX. International Symposium-2025 brought together the world's professions & practitioners from different fields of environmental, applied sciences & environmental engineering. The main aim of the X. International Symposium-2026 is an annual meeting for discovering the next generation of breakthroughs — a structured journey that begins with bold ideas from world-renowned professional and young scientists refined throughout 2026 across critical domains: Energy, Climate, Nature, Food, Water, Waste, and Health. Although the X. International Symposium-2026 is an annual meeting for culmination of this process. Over two days, a select group of innovators, funders, and eco-socio-economic decision-makers will come together to decide which of those ideas have the greatest potential to change humanity's future and to help those ideas advance towards becoming a reality. The organizers have the great pleasure to thanks the participants who take part present in the program of the **ONLINE X. International Symposium-2026** deals with „**Environmental Health & Biosecurity: Sciences, Engineering & Application**” during May 07th - May 08th 2026 in Budapest, Hungary. The Symposium-2026 will carry out with Workshop Session dealing with special theme: **Environmental Health & Climatic Change (Ecosystem Restoration for Climate Change Mitigation: Processes, Practices, & Co-Benefits)** under the idea of **No Security Without Climate Security**.
Wish all the best and great successful for all participants.

Prof. Dr. Hosam Bayoumi Hamuda
President of ICEEE
Chairman of the Symposium
Obuda University
Budapest - Hungary
E-mail: bayoumi.hosam@uni-obuda.hu
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SESSIONS

X. INTERNATIONAL SYMPOSIUM-2026

- *Session (A):
Healthcare: Risk & Management, Public Health & Nutrition*
- *Session (B):
Soil Biology, Agricultural & Food Security,
Ecosystems & Landscape Conservation & Protection*
- *Session (C):
Air, Water & Sediments Pollution & Waste Management*
- *Session (D):
Education, Innovation & Knowledge Transfer,
Artificial intelligence, Bioinformatics, & Circular Economy Strategy*
- *Session (E):
Energy Research & Applications, Biomass Conversion for Bioenergy*



Xth. International Symposium-2026

IMPORTANT INFORMATION

- Conference is: **ONLINE, FREE OF CHARGE**
 - Host Place: Obuda University, Budapest - **Hungary**
 - Dates: **May 7 - 8, 2026**
 - The languages of conference: **English.**
 - The abstracts and full papers will be published after the conference in the **Proceedings Book with ISBN** code.
 - After the Conference, each participant who makes a presentation will have a "**Participation Certificate**" and "The Best Presentation and Paper Award" document will be sent by e-mail.
 - We would like to encourage and amplify the transfer of knowledge between scientists with different backgrounds and from different disciplines who study, solve or apply the same types of equations. At the same time, we are taking this opportunity to explore new forms of communication in Conference publishing **Proceedings Book with ISBN.**
- The Conference will be held through **Microsoft Teams.**
 - To join the Conference: you will have a short guide with useful information about how to use the Microsoft Teams during the Conference
 - The time of the Conference is related to the **Hungarian time.**
 - Please check the time with your time at home



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Organizers:

- International Council of Environmental Engineering Education (ICEEE), Hungary*
- Obuda University (OU), Hungary*
- International Society of Waste Management, Air & Water, India*
- Green India Clean Environment Society, India*
- World Council of Professionals and Industries, India*
- Azerbaijan Technological University, Azerbaijan*
- University of Coimbra, Coimbra, Portugal*
- Uzhhorod National University, Uzhhorod, Ukraine*
- Rejto Sandor Faculty of Light Industry & Environmental Engineering (RKK), Hungary*
- Hungarian Soil Science Society, Soil Biology Department (MTT, TB), Hungary*
- Institute of Environmental Engineering & Natural Sciences (KTI), Hungary*

Information about the Symposium

- The technical programme of the Symposium will consist of:*
 - **Oral Presentations**
 - Plenary, keynote & invited lectures,
 - Contributory papers,
 - Discussions with senior scientists
 - **Poster presentations.**



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The Symposium-2026 is carrying out under the patronage of:

– *Prof. Dr. Levente KOVÁCS*

Rector, Obuda University

– *Dr. László KOLTAI*

Dean, Rejto Sandor Faculty of Light Industry & Environmental Engineering

– *Dr. Rita BODÁNÉ-KENDROVICS*

Deputy Dean, Director, Institute of Environmental Engineering & Natural Sciences

– *Dr. Edit CSANÁK*

Deputy Dean, Director of the Product Design Institute

– *Prof. Dr. Hosam BAYOUMI HAMUDA*

President, International Council of Environmental Engineering Education

Chairman of the Symposium

Honor Guest of the Symposium:

– *Prof. Dr. Rajendra Kumar Isaac*

Executive Director

World Council of Professionals and Industries, India

Department of Irrigation and Drainage Engineering Vaugh School of Agricultural Engineering and Technology (VSAET) Sam

Higginbottom University of Agriculture, Technology and Sciences (SHUATS), Prayagraj (Allahabad), Uttar Pradesh, India



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The Short Scientific Programme at Glance

07th of May 2026 (Thursday)

Registration online

(08:00 am – 09:00 a.m.)

Opening Ceremony

(09:00 – 09:30)

Plenary Session

(09:30 – 12:15)

Lunch break

(12:15 – 13:00)

For all sessions (A, B, C, E)

Oral Sessions (13:00 – 17:00)

Poster Sessions I. (17:00 – 17:35)

08th of May 2026 (Friday)

Continuation of the presentation for all sessions

Registration online

(08:00 – 09:00)

Keynote and Oral Sessions

(09:00 – 10:00)

Session D

(09:00– 10:30)

Poster Sessions II.

(10:00– 10:15)

10:15 – 11:15

Workshop Special Session:

Environmental Health & Climatic Change

***(Ecosystem Restoration for Climate Change Mitigation:
Processes, Practices, & Co-Benefits)***

12:15

Closing ceremony



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The Detailed Scientific Programme



Xth. International Symposium-2026

07th of May 2026 (Thursday)

08:00 am – 09:00 am Registration online

09:00 – 09:30 Opening Ceremony

<https://teams.microsoft.com/meet/345179265032405?p=OcOSHNjoQeJ7NhpKoQ>

- **09:00 Prof. Dr. Hosam BAYOUMI HAMUDA**
President, International Council of Environmental Engineering Education
Chairman of Symposium

- **09:05 Dr. László KOLTAI**
Dean, Rejtő Sándor Faculty of Light Industry & Environmental Engineering

- **09:10 Prof. Dr. László GULÁCSI**
Vice Rector for Research, Óbuda University

- **09:20 Dr. Rita BODÁNÉ-KENDROVICS**
Deputy Dean
Director, Institute of Environmental Engineering & Natural Sciences



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09:30 – 12:15

Plenary Session

<https://teams.microsoft.com/meet/345179265032405?p=OcOSHnjoQeJ7NhpKoQ>

Chair of the Session: Hosam Bayoumi Hamuda

PL1 09:30 – 09:55

– **Rajendra Kumar Isaac**

World Council of Professionals and Industries, India

**HYDROLOGICAL SYSTEMS UNDER STRESS: ENVIRONMENTAL
HEALTH IMPLICATIONS AND BIOSECURITY CHALLENGES**

PL2 09:55 – 10:20

– **B. S. PANWAR¹, Iarisa S. YAKUBOVA²**

¹Department of Soil Science, CCS Haryana Agriculture University, Hisar, India

²Department of Industrial Engineering, Karshi State University, Karshi, Republic of Uzbekistan

**SOME INNOVATIVE APPROACH FOR JUDICIOUS USE OF
FERTILIZERS AND MANURES**

PL3 10:25 – 10:50

– **Murari Lal GAUR**

Kaziranga University, Jorhat, Assam, India

**FROM WATERSHEDS TO LIVING RIVERS: INTEGRATING NATURE,
ENGINEERING, AND INTELLIGENCE**

10:50 – 11:00

Break



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PL4 11:00 – 11:25

– **Lyudmyla SYMOCHKO^{1,2,4}, M.Nazaré PINHEIRO^{3,4}, Olena DEMYANYUK³**

¹University of Coimbra, Faculty of Science and Technology, Centre for Functional Ecology, Department of Life Sciences, Coimbra, Portugal

²Institute of Agroecology and Environmental Management, Kyiv, Ukraine

³Polytechnic University of Coimbra, Coimbra, Portugal

⁴CERNAS, Research Center for Natural Resources, Environment and Society, Polytechnic University of Coimbra, Coimbra, Portugal

**IMPACT OF MILITARY DISTURBANCE ON SOIL MICROBIOME
STRUCTURE AND FUNCTIONS**

PL5 11:25 – 11:50

– **Filiz ERSÖZ¹, Deniz Ö. GENÇ¹, Taner ERSÖZ²**

¹Ostim Technical University, Ankara, Turkey

²Karabük University, Karabük, Turkey

**FORECASTING RESERVOIR WATER STORAGE LEVELS IN
ISTANBUL USING MACHINE LEARNING AND EXPLAINABLE
ARTIFICIAL INTELLIGENCE**

PL6 11:50 – 12:15

– **Giuseppe CIABURRO**

Department of Engineering, Faculty of Engineering and Informatics, Pegaso University, Naples, Italy.

**INTEGRATING RENEWABLE ENERGY SYSTEMS IN URBAN
ENVIRONMENTS: EMERGING TECHNOLOGIES FOR MINIMIZING
VISUAL AND ACOUSTIC IMPACTS**

12:15 – 13:00

Lunch Break



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Technical Sessions



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Session (A): Healthcare: Risk & Management, Public Health & Nutrition

<https://teams.microsoft.com/meet/34786118573981?p=bm8mejlqrgWGAJalpw>

13:00 – 13:45

Chair of the Session: Vera ALPÁR

Keynote Speakers:

KN1: 13:00 – 13:15

– Neha Singh RAGHUVANSHI

ABES EC GHAZIABAD, India

FROM EXPOSURE TO INTELLIGENCE: AI-ENABLED DISTRIBUTED SENSING NETWORKS FOR REAL-TIME ENVIRONMENTAL HEALTH

KN2: 13:15 – 13:30

– Vera ALPÁR

Budapest Metropolitan University – FEIR HUB Research Center, Budapest, Hungary

THE FUTURE OF NEUROTECHNOLOGIES: HEALTHCARE RISK, MANAGEMENT AND PUBLIC HEALTH IMPLICATIONS

KN3: 13:30 – 13:45

– Ágnes BÁLINT, Dorottya SZEIFERT

Obuda University, Institute of Environmental Engineering and Natural Sciences, Budapest, Hungary.

FROM FIELD TO TABLE: VARIABILITY OF NITRATE AND NITRITE CONTENT IN VEGETABLES ACROSS RETAIL SOURCES



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Oral Presentation

13:45 – 15:15

Chair of the Session: Neha Singh RAGHUVANSHI

TSA₁ 13:45 – 13:55

– **Neha Singh RAGHUVANSHI**

ABES EC GHAZIABAD, India

**ENGINEERING BIOSECURE URBAN ECOSYSTEMS: INTEGRATING
SUSTAINABLE INFRASTRUCTURE, PATHOGEN RISK MODELING,
AND CLIMATE-ADAPTIVE DESIGN**

TSA₂ 13:55 – 14:05

– **Sumaya Binta ASHRAF**

National Institute of Technology Durgapur, Durgapur, India

**THERMAL EXPOSURE-INDUCED RELEASE OF MICROPLASTICS
AND CHEMICALS FROM DISPOSABLE BEVERAGE CUPS: A
CRITICAL REVIEW**

TSA₃ 14:05 – 14:15

– **Sivakumar Joghi Thatha GOWDER**

College of Applied Medical Sciences, King Faisal University, Hufuf, KSA.

**ENVIRONMENTAL CHEMICALS AND RENAL HEALTH: THE
UNDERLYING THREAT**

TSA₄ 14:15 – 14:25

– **Oleksandr PYVOVAROV**

Department Assistant, Kharkiv National Medical University, Kharkiv, Ukraine,

MODERN ASPECTS OF HEALTH protection AND BIOSAFETY



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TSA5 **14:25 – 14:35**

– **Rebeka PÁLFI, Hosam E.A.F. BAYOUMI HAMUDA**

*Óbuda University, Rejtő Sándor Faculty of Light Industry and Environmental Engineering,
Budapest, Hungary*

ANTIMICROBIAL TEXTILE MATERIALS IN HEALTHCARE

TSA6 **14:35 – 14:45**

– **Salwa MABRUK^{1,2}, Lhoucine GEBRATI¹, Faissal AZIZ^{1,3},
Warda Karima⁴**

*¹National Center for Research and Study on Water and Energy (CNEREE), Cadi
Ayyad University, Marrakech, Morocco*

*²Laboratory of Research on Childhood, Health and Sustainable Development,
Cadi Ayyad University, Faculty of Medicine and Pharmacy, Marrakech, Morocco*

*³Laboratory of Water Sciences, Microbial Technologies and Natural Resources
Sustainability, Cadi Ayyad University, Faculty of Sciences Semlalia (FSSM),
Marrakech, Morocco*

*⁴Laboratory of Microbiology-Virology. Faculty of Medicine and Pharmacy, Cadi
Ayyad University, 40000 Marrakech, Morocco.*

**VALORIZATION OF MEDICINAL PLANTS' BIOACTIVE
COMPOUNDS FOR WOUND HEALING USE**

TSA7 **14:45 – 14:55**

– **Kenza IRINISLIMANE**

*Research Unit Materials, Processes & Environment, M'Hamed Bougara
University, Boumerdes, Algeria*

**OCCUPATIONAL HAZARD PREVENTION RELATED TO MERCURY
AND X-RAYS**



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TSA8 **14:55 – 15:05**

– **Karolina PESEI**

Óbuda University, Budapest, Hungary

**UNDER THE SUN: AN ANALYSIS OF THE LIVED EXPERIENCES OF
HEAT AND ITS IMPACT ON MENTAL WELLBEING**

TSA9 **15:05 – 15:15**

– **Titanilla EIDEH**

ET Titanilla Eideh, Education &Theraphy, Budapest, Hungary

**INTEGRATIVE MORPHOLOGICAL DIAGNOSIS AND PUBLIC
HEALTH EDUCATION: A SYNERGISTIC FRAMEWORK FOR
CELLULAR HOMEOSTASIS AND PREVENTIVE RISK MANAGEMENT**



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Session (B):

Soil Biology, Agricultural & Food Security, Ecosystems & Landscape Conservation & Protection

<https://teams.microsoft.com/meet/345179265032405?p=OcOSHnjoQeJ7NhpKoQ>

13:00 –16:55 **Chair of the Session: Hosam Bayoumi Hamuda**

TSB₁ 13:00 – 13:10

– **Innocent Tayari MWIZERWA¹, Joseline KATEITA²**

¹College of Environmental Science & Engineering, Donghua University, Shanghai P.R China,

²National Water & Sewerage Corporation, Kampala,

BIOCHAR AS EMERGING MATERIAL FOR ENVIRONMENTAL REMEDIATION: RECENT ADVANCES AND FUTURE OUTLOOK

TSB₂ 13:10 – 13:20

– **Gagan Preet Kour BALI**

Department of Biosciences-UIBT, Chandigarh University, Mohali-140413, Punjab, India.

INSECTS: A PROMISING ALTERNATIVE PROTEIN SOURCE

TSB₃ 13:20 – 13:30

– **Chetan DUBEY, Gagan Preet Kour BALI**

Department of Biosciences, UIBT, Chandigarh University, Mohali, Punjab, India

THE ELEVATOR EFFECT: ALTITUDINAL SHIFTS, DIVERSITY PATTERNS, AND CONSERVATION FOR MOTHS IN THE NORTH-WEST HIMALAYAS.



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TSB4 **13:30 – 13:40**

– **Denis OZEROV Marina Efremova**

Saint-Petersburg State Agrarian University, Saint-Petersburg, Russia

**ACCUMULATION OF COPPER IN THE PLANTS OF LEMON BALM
(MELISSA OFFICINALIS L.) UNDER HYDROPONIC
CONDITIONS**

TSB5 **13:40 – 13:50**

– **Abrar HUSSAIN, Syed Abid ALI**

*Third World Center for Science and Technology, HEJ Research Institute of
Chemistry, International Center for Chemical and Biological Sciences, University
of Karachi, Karachi, Pakistan*

**HARNESSING MICROORGANISMS FOR SUSTAINABLE
BIOMINING: MECHANISMS, APPLICATIONS, AND FUTURE
PROSPECTS**

TSB6 **13:50 – 14:00**

– **Farhat ul Ain SIDDIQUI, Najm us SAHAR, Omaisah Ejaz
ASAD, Iqra AJAZ, Syeda Khoulah HUSSAIN, Khizra JAWED**

*Ziauddin University Faculty of Engineering, Science, Technology and
Management, Karachi, Pakistan*

**CHARACTERIZATION OF TOXIGENICITY OF ASPERGILLUS
FLAVUS AND TOTAL AFLATOXIN IN COMMERCIALY AVAILABLE
SPICES THROUGH ELISA**



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TSB7 **14:00 – 14:10**

- **Galiya K. AKHMETOVA₁, Sergey OBLASOV₁, Kamilya SYDYKOVA₂, Aigerim SOLTYBAYEVA₂, Radmir SARSENOV₂, Alexandr LISENOVICH₁, Aldabergen KIYAS₁**

*¹LLP A.I. Barayev “Research and Production Centre for Grain Farming”
Shortandy, Kazakhstan*

²Nazarbayev University, Astana, Kazakhstan

**CROP ROTATION PRACTICES IMPROVE SOIL HEALTH IN THE
AKMOLA REGION, NORTH KAZAKHSTAN**

TSB8 **14:10 – 14:20**

- **Ines HARZLI, Yasemin Özdener KÖMPE**

*Department of Biology, Faculty of Sciences and Arts, University of Ondokuz
Mayis, Atakum, Türkiye*

**ENHANCING CONSERVATION OF ANACAMPTIS PAPILIONACEA:
COMPARING IN VITRO AND IN SITU SYMBIOTIC GERMINATION
APPROACHES**

TSB9 **14:20 – 14:30**

- **Yara EzAl Deen SULTAN**

Department of Chemistry, Vel Tech, Chennai, Tamil Nadu, India

**GIS AND REMOTE SENSING-BASED REVIEW OF WILDFIRE
BEHAVIOR: SPATIAL DRIVERS, SPREAD DYNAMICS, AND
MODELING APPROACHES**

TSB10 **14:30 – 14:40**

- **Sivakumar Joghi Thatha GOWDER**

College of Applied Medical Sciences, King Faisal University, Hufuf, KSA

**ENVIRONMENTAL DISASTERS AND FOOD SECURITY:
ADDRESSING UNDERLYING CRITICAL CHALLENGES**



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TSB11 **14:40 – 14:50**

– **Mahdhi MOSBAH, Mahmoudi NEJI, Mars MOHAMED**

University of Gabes, Faculty of Sciences of Gabes, Laboratory of Biodiversity and Valorization of Bioresources in Arid Zones (LR18ES36), Gabes, Tunisia

AMF COLONIZATION OF SPARTIDIUM SAHARAE AND EFFECTS ON SOIL MICROBIAL PROPERTIES IN TUNISIAN DESERTS

TSB12 **14:50 – 15:00**

– **Rabah ZEDAM¹, Chams ABID², Marwa BENSLAMA³**

¹Department of Geology, Faculty of Earth Sciences and Architecture, Larbi Ben M'hidi University, Oum El Bouaghi, Algeria,

²Larbi Ben M'hidi University, Oum El Bouaghi, Algeria,

³Larbi Ben M'hidi University, Oum El Bouaghi, Algeria

AGRICULTURAL SOIL EROSION IN OULED HAMLA - AIN M'LILA, NE ALGERIA: ENVIRONMENTAL CHALLENGES, CONSERVATION, AND AGRICULTURAL YIELD

TSB13 **15:00 – 15:10**

– **Rachid MOUQADDEM^{1,2}, Naaila OUAZZANI^{1,2}, Ahlam LAFDALI^{1,2}, Achraf BERRADI^{1,2}, Faissal AZIZ^{1,2}**

¹National Center for Research and Studies on Water and Energy (CNEREE), Cadi Ayyad University, Marrakech, Morocco.

² Cadi Ayyad University, Faculty of Sciences Semlalia, Laboratory of Water Sciences, Microbial Biotechnologies and Natural Resources Sustainability, Marrakech, Morocco.

BIO-SUPERABSORBENT POLYMERS FOR SOIL CONDITIONING: FROM CLASSIC GENERALITIES TO ADVANCED NON-THERMAL SYNTHESIS.



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TSB14 **15:10 – 15:20**

– **Ahlam LAFDALI^{1,2,3}, Achraf BERRADI^{1,2}, Rachid MOUQADDEM^{1,2}, Salima ATLAS^{3,5}, Mustapha RAIHANE^{3,4}, Faissal AZIZ^{1,2}**

¹Cadi Ayyad University, Faculty of Sciences Semlalia, Laboratory of Water Sciences, Microbial Biotechnologies and Natural Resources Sustainability, Marrakech, Morocco.

²National Center for Research and Studies on Water and Energy (CNEREE), Cadi Ayyad University, Marrakech, Morocco.

³Laboratory of Innovative Materials, Energy and Sustainable Development. Cadi Ayyad University, Faculty of Science and Technology, Marrakech, Morocco.

⁴CCSE. Applied Chemistry and Engineering Research Centre of Excellence, Mohammed VI Polytechnic University, Hay Moulay Rachid Ben Guérir, Morocco.

⁵ERSIC Research Group, Department of Chemistry, Polydisciplinary Faculty, University Sultan Moulay Slimane, Mghila, Béni-Mellal, Morocco.

TOWARD SUSTAINABLE IRRIGATION: SYNTHESIS OF SUPERABSORBENT HYDROGEL FOR WATER MANAGEMENT IN AGRICULTURE

TSB15 **15:20 – 15:30**

– **Achraf BERRADI^{1,2}, Ahlam LAFDALI^{1,2,3}, Naaila OUAZZANI^{1,2}, Faissal AZIZ^{1,2}**

¹Laboratory of Water Sciences, Microbial Biotechnologies and Natural Resources Sustainability, Faculty of Sciences Semlalia, Cadi Ayyad University, Marrakech, Morocco.

²National Center for Research and Studies on Water and Energy, Cadi Ayyad University, Marrakech, Morocco.

³Laboratory of Innovative Materials, Energy and Sustainable Development, Faculty of Science and Technology, Cadi Ayyad University, Marrakech, Morocco.

CARBOXYMETHYL CELLULOSE-BASED SUPERABSORBENT HYDROGEL FOR ENHANCED SOIL WATER MANAGEMENT IN AGRICULTURE



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TSB16 15:30 – 15:40

– Salma Ayadi^{1,2}, Faissal AZIZ^{1,2}

¹Lab of Water Sciences, Microbial Biotechnologies and Natural Resources Sustainability, FSSM, Cadi Ayyad University, Marrakech, Morocco

²National Center for Studies and Research on Water and Energy, Cadi Ayyad University, Marrakech, Morocco

VALORIZATION OF BIOPOLYMERS EXTRACTED FROM LOCAL ALGAE FOR THE FUTURE DEVELOPMENT OF BIO-NANOCOMPOSITE MEMBRANES WITH ENVIRONMENTAL AND INDUSTRIAL APPLICATIONS

TSB17 15:40 – 15:50

– Chaimae MALDOU^{1,2}, Dominique COURAULT³, Kamal BARAKA⁴, Tonni Agustiono KURNIAWAN⁵, Naaila OUAZZANI^{1,2}, Faissal AZIZ^{1,2}

¹Cadi Ayyad University, Faculty of Sciences Semlalia of Marrakech, Laboratory of Water Sciences, Microbial Biotechnologies and Natural Resources Sustainability, Marrakech, Morocco

²National Center for Research and Studies on Water and Energy, Cadi Ayyad University, Marrakech, Morocco

³UMR EMMAH, INRAE–Avignon University, Avignon, France

⁴National School of Applied Sciences-Safi, Cadi Ayyad University, Safi, Morocco

⁵College of the Environment and Ecology, Xiamen University, Xiamen, China

INNOVATIVE APPROACHES FOR THE REUSE OF TREATED WASTEWATER IN OLIVE IRRIGATION AND OPTIMIZATION OF WATER MANAGEMENT THROUGH REMOTE SENSING IN MOROCCO



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TSB18 15:50 – 16:00

– Chaimae MALDOU¹, Dominique COURAULT², Kamal BARAKA³, Tonni Agustiono KURNIAWAN⁴, Naaila OUAZZANI⁵, Faissal AZIZ^{1,2}

¹Cadi Ayyad University, Faculty of Sciences Semlalia of Marrakech, Morocco

²Laboratory of Water Sciences, Microbial Biotechnologies and Natural Resources Sustainability, Marrakech, Morocco

³National Center for Research and Studies on Water and Energy, Cadi Ayyad University, Marrakech, Morocco

⁴UMR EMMAH, INRAE–Avignon Université, Avignon, France

⁵National School of Applied Sciences-Safi, Cadi Ayyad University, Safi, Morocco

⁶College of the Environment and Ecology, Xiamen University, Xiamen, China

EVALUATION OF INNOVATIVE TECHNIQUES FOR REUSING TREATED WASTEWATER IN IRRIGATION AND APPLICATION OF REMOTE SENSING FOR OPTIMIZING WATER MANAGEMENT IN OLIVE ORCHARDS IN MOROCCO

Plenary Lecture

PL7 16:00 – 16:25

– Borbála BIRÓ

*Hungarian University of Agriculture and Life Sciences, Institute of Environmental Sciences, Dept. of AgriEnvironmental Studies, Budapest, Hungary
Hungarian Soil Science Society, Soil Biology Department, Hungary*

SOIL-MICROBIAL STATUS DEMONSTRATES THE RISKS OF ACCUMULATING HEAVY METALS IN SEWAGE SLUDGE-TREATED HUNGARIAN SOILS ON A LONG-TERM BASIS

16:25 – 16:35

Break



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TSB19 16:35 – 16:45

– **Asmae EL FATMI^{1,2}, Hiba ZEGROUD^{1,2}, Sara ELHAMJI^{1,2},
Karim SBIHI^{2,3}, Faissal AZIZ^{1,2}**

¹Laboratory of Water Sciences, Microbial Technologies and Natural Resources Sustainability, Cadi Ayyad University, Faculty of Sciences Semlalia (FSSM), Marrakech, Morocco

²National Centre for Research and Study on Water and Energy (CNEREE), University Cadi Ayyad, Marrakech, Morocco

³Laboratory Analysis, Modeling, Engineering, Natural Substances and Environment, Natural Substances, Health and Environment Team, Polydisciplinaire Faculty of Taroudant, University Ibn Zohr, Morocco

**TREATMENT OF OLIVE MILL WASTEWATER USING MICROALGAE:
POLYPHENOL REMOVAL AND SUSTAINABLE AGRONOMIC
VALORIZATION OF MICROALGAL BIOMASS**

TSB20 16:45 – 16:55

– **Birara ABRAHAM^{1'2'3}, Abdul A.S. KATAKWEBA⁴, Alfian A.
RIJA¹**

¹Department of Wildlife Management, Sokoine University of Agriculture, Morogoro, Tanzania

²Department of Biology, Mekelle University, Mekelle, Ethiopia

³African Center of Excellence for Innovative Rodent Pest Management and Biosensor Technology, Sokoine University of Agriculture, Morogoro, Tanzania

⁴Institute of Pest Management, Sokoine University of Agriculture, Morogoro, Tanzania

**HABITAT AND SEASON INTERACT TO DRIVE REPRODUCTIVE
NICHE PARTITIONING IN TWO ENDEMIC ETHIOPIAN
AFROALPINE RODENTS**



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Session (C):

Air, Water & Sediments Pollution & Waste Management

<https://teams.microsoft.com/meet/381443058491130?p=563cqb54kJWTiwcYRh>

13:00 – 14:00

Chair of the Session: Zita ZRINYI

Keynote speakers

KNC₁ 13:00 – 13:15

– Zita ZRINYI, Barbara DUBA, Ivett PALFI, Katleho KOQO,
Renata GERENCSEK-BERTA

*Soos Erno Research and Development Center, University of Pannonia,
Nagykanizsa, Hungary*

**INVESTIGATION OF ENVIRONMENTAL MICROPLASTICS: FROM
RECOGNITION TO HOLOGRAPHIC IDENTIFICATION**

KNC₂ 13:15 – 13:30

– Sándor J. ZSARNÓCZAI – Norbert BERECS

*Óbuda University, Rejtő Sándor Faculty of Light Industry and Environmental
Engineering, Institute of Environmental Engineering, Natural Sciences,
Budapest, Hungary.*

**CRISIS MANAGEMENT OF COMPANIES INVESTING IN ECONOMIC
SECTORS**

Oral speakers



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TSC₁ 13:30 – 13:40

– Hira SHAHBAZ, Shakeel MAHMOOD

Department of Geography, Government College University Lahore, Lahore, Pakistan

GEO-VISUALISATION OF AIR QUALITY USING GOOGLE EARTH ENGINE: A TRANSBOUNDARY STUDY OF PAKISTAN AND INDIA

TSC₂ 13:40 – 13:50

– Samiyah TASLEEM_{1,2}, S.M. MOINUDDIN₂, Muhammad EJAZUDDIN₂

₁Department of Applied Science, FEST, Hafiz Muhammad Iyas Institute of Pharmacology & Herbal Sciences, Karachi, Hamdard University and ADRC Bahria University – Karachi, Pakistan

₂Pakistan Education and Health Consultant Group

ASSESSING THE DRINKING WATER QUALITY OF SELECTED AREAS OF THE PAKISTAN MEGA CITY

TSC₃ 13:50 – 14:00

– Andrea ORBÁN_{1,2}, Viola SOMOGYI₂

₁Sistemul de Gospodărire a Apelor Covasna, Sfântu Gheorghe, România,

₂University of Pannonia, Veszprém, Hungary,

LONG-TERM PERFORMANCE AND COMPLIANCE ANALYSIS OF SMALL WASTEWATER TREATMENT PLANTS UNDER UNIFORM REGULATORY STANDARDS: EVIDENCE FROM COVASNA COUNTY (ROMANIA)



Xth. International Symposium-2026

14:00 – 15:00 **Chair of the Session: Sándor J. ZSARNÓCZAI**

TSC₄ **14:00 – 14:10**

– **Myung Jin Kim, Sándor J. Zsarnóczai, Norbert Berecz**

Óbuda University, Rejtő Sándor Faculty of Light Industry and Environmental Engineering, Institute of Environmental Engineering, Natural Sciences, Budapest, Hungary

**ENVIRONMENTAL MANAGEMENT AND IMPACT ASSESSMENT OF
THE FOUR MAJOR RIVERS RESTORATION PROJECT IN THE
REPUBLIC OF KOREA**

TSC₅ **14:10 – 14:20**

– **Ágnes BÁLINT¹, Rita KISS², Xuechu WANG², Csaba
MÉSZÁROS²**

¹Obuda University, Institute of Environmental Engineering and Natural Sciences, Budapest, Hungary,

²Hungarian University of Agriculture and Life Sciences, Gödöllő, Hungary.

**ROADSIDE HEAVY METAL CONTAMINATION IN HUNGARY: A
CASE STUDY ALONG HIGHWAY 24 (KM 32)**

TSC₆ **14:20 – 14:30**

– **Bushra ATFEH**

Department of Meteorology, Eötvös Loránd University, Budapest, Hungary.

**ASSESSMENT OF INDOOR AIR QUALITY IN A RESIDENTIAL
APARTMENT IN BUDAPEST USING A LOW-COST SENSOR**



Xth. International Symposium-2026

TSC7 14:30 – 14:40

– **Barbara DUBA, Renáta GERENCSÉR- BERTA, Ivett PÁLFI,
Zita ZRÍNYI**

*University of Pannonia University Center of Circular Economy, Nagykanizsa,
Hungary,*

**SMALL SIZE, BIG PROBLEM: MICROPLASTICS IN THE
ENVIRONMENT**

TSC8 14:40 – 14:50

– **Xuechu WANG¹, Csaba MÉSZÁROS², Ágnes BÁLINT³**

*¹Hungarian University of Agriculture and Life Sciences, Doctoral School of
Natural Sciences, Gödöllő, Hungary,*

*²Hungarian University of Agriculture and Life Sciences, Institute of Mathematics
and Basic Science, Gödöllő, Hungary,*

*³Obuda University, Institute of Environmental Engineering and Natural Sciences,
Budapest, Hungary.*

**WHEN POLLUTANTS INTERACT: COMBINED IMPACTS OF HEAVY
METALS AND MICROPLASTICS ON EARLY PLANT GROWTH**

TSC9 14:50 – 15:00

– **Yanina ROMERO¹, Janette BESSEMBINDER², Nick VAN DE
GIESEN³, Frans VAN DE VEN³**

¹Beuningen, The Netherlands,

²Royal Netherlands Meteorological Institute, De Bilt, The Netherlands

³Delft University of Technology, Delft, The Netherlands

**A RELATION BETWEEN EXTREME DAILY PRECIPITATION AND
EXTREME SHORT-TERM PRECIPITATION**



Xth. International Symposium-2026

15:00 – 15:40

Chair of the Session: **Sándor J. ZSARNÓCZAI**

TSC10 15:00 – 15:10

– **Bouthaina OTHMANI¹, José A.F. GAMELAS², Maria G. RASTEIRO², Moncef KHADHRAOUI¹**

¹Laboratory of Environmental Engineering and Ecotechnology, ENIS, Sfax, Tunisia

²Department of Chemical Engineering, FCTUC, University of Coimbra, Coimbra, Portugal

ECOFRIENDLY TREATMENT OF COLOURED WASTEWATER USING GREEN FLOCCULANTS

TSC11 15:10 - -15:20

– **Yosra Hadj MANSOUR^{1,2}, Ângela CUNHA³, Diana. C. G. A. PINTO⁴, Maria Helena NADAIS⁵, Moncef KHADHRAOUI¹, Mongi SAOUDI²**

¹Laboratory for Environmental Engineering and Eco-Technology (GEET), National Engineering School of Sfax, University of Sfax, Tunisia

²Laboratory of Biomathematics, Faculty of Sciences of Sfax, University of Sfax, Tunisia.

³CESAM & Biology Department, University of Aveiro, Campus de Santiago, Aveiro, Portugal

⁴LAQV-REQUIMTE, Department of Chemistry, University of Aveiro, Campus de Santiago, Aveiro, Portugal

⁵CESAM & Department of Environment and Planning, University of Aveiro, Aveiro, Portugal

PERFORMANCE OF PLANT-BASED FLOCCULANTS IN SLUDGE CONDITIONING: DEWATERING POTENTIAL, DISINFECTION EFFICIENCY AND PHYTOTOXICITY



Xth. International Symposium-2026

TSC₁₂ 15:20 – 15:30

– Ahmed Samer TOUATI¹, Ammar MAOUI², Yassine GUEROUI²

¹Department of Ecology and Environmental Engineering, University 8 May 1945 Guelma, Guelma, Algeria

²Civil engineering and hydraulics laboratory (LCGH), University 8 Mai 1945 Guelma, Guelma, Algeria

APPLICATION OF PRINCIPAL COMPONENT ANALYSIS (PCA) TO IDENTIFY HYDROCHEMICAL PROCESSES IN THE BOUHAMDANE SUB-BASIN (NORTHEASTERN, ALGERIA)

TSC₁₃ 15:30 – 15:40

– Cheriet MANEL

University of Constantine 1, Faculty of Earth Sciences, Department of geological sciences, Constantine, Algeria

CLIMATE VARIATIONS AND THEIR IMPACTS ON TEMPERATURE: THE CASE OF THE BATNA AREA

15:40 – 16:30

Chair of the Session: Ágnes BÁLINT

TSC₁₄ 15:40 – 15:50

– Kebili MOKHTAR¹, Bouselsal BOUALEM², Gouaidia LAYACHI¹, Johnbosco C. EGBUERI²

¹Laboratory of Sedimentary Environment and Mineral and Water Resources in Eastern Algeria, Department of Earth Sciences, Larbi Tebessi University, Route de Constantine, Tebessa, Algeria

²Laboratory of Underground Reservoirs: Oil, Gas and Aquifers, University of Kasdi Merbah Ouargla, Algeria

HYDROGEOCHEMISTRY, WATER QUALITY, AND SULFATE-DRIVEN HEALTH RISKS IN A FOSSIL CONFINED AQUIFER SYSTEM OF THE ALGERIAN SAHARA



Xth. International Symposium-2026

TSC₁₅ 15:50 – 16:00

– **Sara Alia LAKHDARI, Boualem BOUSELSAL**

Laboratory of Underground Reservoirs: Oil, Gas and Aquifers, Department of Earth and Universe Sciences, University of Kasdi Merbah, Route de Ghardaia, Ouargla, Algeria

**GROUNDWATER QUALITY DETERIORATION IN ARID REGION
USING WATER QUALITY INDEX**

TSC₁₆ 16:00 – 16:10

– **Idir Menad HOUARI, Boualem BOUSELSAL, Alia Sara LAKHDARI**

University of KASDI MERBAH Ouargla, Algeria

**GROUNDWATER POTABILITY ASSESSMENT AND HEALTH RISK
EVALUATION OF NITRATE CONTAMINATION IN SEMI-ARID
ALGERIA**

TSC₁₇ 16:10 - 20

– **Jamila SABYH_{1,2}, Salma AYYADI_{1,2}, Naaila OUAZZANI_{1,2},
Faissal AZIZ_{1,2}**

¹Cadi Ayyad University, Faculty of Science Semlalia of Marrakech, Laboratory of Water Sciences, Microbial Biotechnologies and Natural Resources Sustainability, Marrakech, Morocco.

²National Center for Studies and Research on Water and Energy, Cadi Ayyad University, Marrakech, Morocco

**OLIVE OIL EXTRACTION WASTE AS A PRECURSOR FOR REDUCED
GRAPHENE OXIDE: GREEN SYNTHESIS AND STRUCTURAL
CHARACTERIZATION**



Xth. International Symposium-2026

TSC18 16:20 – 16:30

– Boyd T Miller

Texas A-M Law School, Cincinnati, USA

THE COMPACT CLAUSE AND THE AFTERMATH OF POOR POLICY



Xth. International Symposium-2026

**Session (E):
Energy Research & Applications, Biomass Conversion
for Bioenergy**

<https://teams.microsoft.com/meet/356944551630306?p=cwprluDIMxfzp23orX>

13:00 – 13:50 **Chair of the Session: Giuseppe CIABURRO**

TSE₁ **13:00 – 13:10**

– **Abdelfettah GHERIB, Sonia ZERTAL, Nabil CHARCHAR**

*Laboratory of environmental biomonitoring and expertise Biotechnology
research Centre -CRBt of Constantine, Algeria*

**VALORIZATION OF ALGERIAN EXTREME ENVIRONMENT'S
MICROALGAE FOR BIOTECHNOLOGICAL APPLICATIONS**

TSE₂ **13:10 – 13:20**

– **Hiba ZEGROUD^{1,2}, Asmaa EL FATMI^{1,2}, Karim SBIHI^{2,3},
Faissal AZIZ^{1,2}**

*¹Laboratory of Water Sciences, Microbial Technologies and Natural Resources
Sustainability, Cadi Ayyad University, Faculty of Sciences Semlalia (FSSM),
Marrakech, Morocco*

*²National Centre for Research and Study on Water and Energy (CNEREE),
University Cadi Ayyad, Marrakech, Morocco*

*³Laboratory Analysis, Modeling, Engineering, Natural Substances and
Environment, Natural Substances, Health and Environment Team,
Polydisciplinaire Faculty of Taroudant, University Ibn Zohr, Morocco*

**MICROALGAE-BASED TREATMENT OF OLIVE OIL MILL
WASTEWATER AND BIOMASS VALORIZATION FOR SUSTAINABLE
BIOENERGY PRODUCTION**



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TSE₃ 13:20 – 13:30

– Az-iddine ASKIR^{1,2}, Mohamed KHAYET^{1,3,4}, Boukendil MOHAMMED⁵, Faissal AZIZ^{1,2}

¹National Center for Research and Studies on Water and Energy (CNEREE), Cadi Ayyad University, Marrakech, Morocco

²Cadi Ayyad University, Faculty of Sciences Semlalia, Laboratory of Water Sciences, Microbial Biotechnologies and Natural Resources Sustainability, Marrakech, Morocco

³Department of Structure of Matter, Thermal Physics and Electronics, Faculty of Physics, University Complutense of Madrid, Avda. Complutense, Madrid, Spain

⁴Madrid Institute for Advanced Studies of Water (IMDEA Water Institute), Calle Punto Com, Alcalá de Henares, Madrid, Spain

⁵LMFE, Department of Physics, Cadi Ayyad University, Faculty of Sciences Semlalia, Marrakesh, Morocco

**PHOTO-THERMAL ACTIVE MEMBRANE DISTILLATION FOR
ADVANCED DESALINATION AND BRINES TREATMENT**

TSE₄ 13:30 – 13:40

**– Amal JOHARI^{1,2,4}, Mohammed KHALIJ¹, Yassir BELLAZIZ²,
Fatima AIT NOUH^{3,4}, Abdelhamid KHEIRI¹, Mohammed
BOUKENDIL², Faissal AZIZ^{4,5}**

¹Theoretical and Applied Energetics and Mechanics Laboratory (LEMETA), University of Lorraine, CNRS, Vandoeuvre-les-Nancy, France

²Fluid Mechanics and Energetic Laboratory (LMFE) Unit Affiliated to CNRST (URL-CNRST N° 16), Faculty of Sciences Semlalia, Cadi Ayyad University, Marrakesh, Morocco.

³Fundamental and Applied Physics Laboratory (LPFAS), Polydisciplinary Faculty of Safi (FPS), Cadi Ayyad University, Safi, Morocco.

⁴National Centre for Studies and Research on Water and Energy (CNEREE), Cadi Ayyad University, Marrakech, Morocco.

⁵Laboratory of Water Sciences, Microbial Biotechnologies, & Natural Resources Sustainability, Semlalia Faculty of Sciences, Cadi Ayyad University, Marrakech, Morocco



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DESIGN AND OPTIMIZATION OF A SOLAR FURNACE COUPLED WITH A THERMAL CONCENTRATOR FOR SUSTAINABLE BIOCHAR PRODUCTION

TSE₅ 13:40 – 13:50

– Yassir BELLAZIZ^{1,2}, Amal JOHARI^{1,2,3}, Mohammed KHALIJ³, Fatima AIT NOUH^{2,4}, Abdelhamid KHEIRI², Mohammed BOUKENDIL¹, Faissal AZIZ^{1,2}

¹Laboratory of Water Sciences, Microbial Biotechnologies, & Natural Resources Sustainability, Semlalia Faculty of Sciences, Cadi Ayyad University, Marrakech, Morocco,

²National Center for Studies and Research on Water and Energy (CNEREE), Cadi Ayyad University, Marrakech, Morocco.

³Theoretical and Applied Energetics and Mechanics Laboratory (LEMETA), University of Lorraine, CNRS, Vandoeuvre-les-Nancy, France

⁴Fundamental and Applied Physics Laboratory (LPFAS), Polydisciplinary Faculty of Safi (FPS), Cadi Ayyad University, Safi, Morocco

⁵Fluid Mechanics and Energetic Laboratory (LMFE) Unit Affiliated to CNRST, Faculty of Sciences Semlalia, Cadi Ayyad University, Marrakesh, Morocco.

MODELING AND SIMULATION OF A SOLAR REACTOR: THERMAL PERFORMANCE OPTIMIZATION



Xth. International Symposium-2026

—Posters Session I.—

<https://teams.microsoft.com/meet/345179265032405?p=OcOSHnjoQeJ7NhpKoQ>

17:00 – 17:35

Chair of the Session: Hosam Bayoumi Hamuda

TSP₁ 17:00 - 17:05

– **Sushma PAUDEL, Sushmita PAUDEL, Sumitra TAMANG,
Rishav DAS, Preety SINGH, Astha SHAKYA**

Himalayan WhiteHouse International College, Kathmandu, Nepal

MOLECULAR CHARACTERIZATION OF PLASMID-MEDIATED TET-A AND APH-A₁ GENES IN MULTIDRUG-RESISTANT GRAM-NEGATIVE BACTERIA ISOLATED FROM MEAT PRODUCTS IN KATHMANDU.

TSP₂ 17:05 - 17:10

– **Safia SAOULI, Rabah KECHICHED**

*Laboratoire des Réservoirs Souterrains: Pétroliers, Gaziers et Aquifères,
Université Kasdi Merbah Ouargla, Algérie.*

MULTI-SCALE CONTROL OF TRACE ELEMENT ENRICHMENT AND ASSOCIATED RISKS IN SEDIMENTARY PHOSPHORITES FROM NORTHEASTERN ALGERIA

TSP₃ 17:10 - 17:15

– **Surayyo XOLIKOVA**

Karshi State University (Uzbekistan)

STRATEGIES FOR PREVENTING AND RESTORING RANGELAND DEGRADATION



Xth. International Symposium-2026

TSP₄ 17:15 - 17:20

– **Izabella VARGA, Hosam E.A.F. BAYOUMI HAMUDA**

*Institute of Environmental Engineering and Natural Sciences, Rejto Sandor
Faculty of Light Industry and Environmental Engineering, Obuda University,
Budapest, Hungary.*

**EVALUATION OF THE ANTIBACTERIAL ACTIVITY OF EPIPHYTIC
LICHENS COLLECTED FROM DIFFERENT BIOGEOGRAPHIC
REGIONS OF THE ESZTERGOM ECOSYSTEM**

TSP₅ 17:20 - 17:25

– **Sara Alia LAKHDARI, Boualem BOUSELSAL**

*Laboratory of Underground Reservoirs: Oil, Gas and Aquifers, Department of
Earth and Universe Sciences, University of Kasdi Merbah, Route de Ghardaia,
Ouargla, Algeria*

**GEOSPATIAL ASSESSMENT OF NITRATE POLLUTION IN
GROUNDWATER AND ITS HEALTH IMPLICATION IN SOUTHERN
ALGERIA (ADRAR BASSIN)**

TSP₆ 17:25 - 17:30

– **Faiza BOUZAHAR¹, Hamza LAOUINI², Abdelhakim
Benkhadda³**

*¹Kasdi Merbah University, Faculty of Hydrocarbons, Renewable Energies, Earth
and Space Sciences Ouargla, Algeria,*

*²Kasdi Merbah University, Faculty of Hydrocarbons, Renewable Energies, Earth
and Space Sciences Ouargla, Algeria,*

³Higher School of Teachers of Ouargla, Algeria.

**IMPLEMENTATION OF A DECISION-SUPPORT MODEL USING
GEOSPATIAL METHODS AND REMOTE SENSING FOR FLOOD
FORECASTING: A CASE STUDY IN WESTERN ALGERIA**



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TSP7 17:30 - 17:35

– Hosam E.A.F. BAYOUMI HAMUDA, Zsófia TANKÓ

*Institute of Environmental Engineering and Natural Sciences, Rejto Sandor
Faculty of Light Industry and Environmental Engineering, Obuda University,
Budapest, Hungary.*

**INTEGRATED ASSESSMENT OF THE CHEMICAL,
MICROBIOLOGICAL AND ECOTOXICOLOGICAL EFFECTS OF
AGROCHEMICALS AND HEAVY METALS ON FAST-GROWING
RHIZOBIA**



Xth. International Symposium-2026

8th of May 2026 (Friday)

I. Session: Keynote Session

<https://teams.microsoft.com/meet/378769867900222?p=FPy9qPkgciFlcvqdiy>

09:00 – 09:45

Chair of the Session: Hosam Bayoumi Hamuda

KN6 09:00 – 10:00

– Mahendra MEHTA

Ministry of water Resources, New Delhi, Government of India

**SUSTAINABLE RIVER MANAGEMENT FOR ENVIRONMENTAL
HEALTH AND GLOBAL BIOSECURITY**

KN7 09:15 – 09:30

– Narendra Kumar Gupta

*Sam Higginbottom University of Agriculture Technology and Sciences,
Prayagraj, India*

**MONITORING RIVER HEALTH USING ADVANCED BIOSENSING,
DATA ANALYTICS AND IT TOOLS**

KN8 09:30 – 09:45

– Monisha ISAAC

River Water User Association (India)

**FISH DATABASES IN BIOSECURITY: MONITORING INVASIVE
SPECIES (CYPRINUS CARPIO) AND PATHOGEN RISKS**



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KN9 09:45 – 10:00

– Hosam E.A.F. Bayoumi Hamuda

*Institute of Environmental Engineering and Natural Sciences, Rejto Sandor
Faculty of Light Industry and Environmental Engineering, Obuda University,
Budapest, Hungary.*

**FUTURE OF ENVIRONMENTAL QUALITY AND GLOBAL HEALTH
UNDER THE IMPACTS OF CLIMATIC CHANGE**



Xth. International Symposium-2026

*Session (D):
Education, Innovation & Knowledge Transfer, Artificial
intelligence, Bioinformatics, & Circular Economy
Strategy*

<https://teams.microsoft.com/meet/313682250009464?p=LvSoySyA96FBMZe3cH>

09:00 – 10:30

Chair of the Session: Csaba Ágoston

TSD₁ 09:00 – 09:10

– **Shaden Berkoz**

Shada Visual Creative Studio, Türkiye Hatay Reyhanlı'da, Türkiye

**BRIDGING SCIENCE AND SOCIETY: THE ROLE OF CINEMATIC
VISUAL STORYTELLING IN BIOSECURITY COMMUNICATION**

TSD₂ 09:10 - 09:20

– **Selçuk KORUCUK¹, Ahmet AYTEKIN², Mustafa ERGÜN³**

*¹Giresun University, Bulancak School of Applied Sciences, Department of
Logistics Management, Giresun, Türkiye*

*²Samsun University, Faculty of Political Sciences, Department of International
Trade and Business Administration, Samsun, Türkiye,*

*³Giresun University, Bulancak School of Applied Sciences, Department of
Logistics Management, Giresun, Türkiye,*

**RANKING THE BARRIERS TO CIRCULAR ECONOMY ADOPTION:
EVIDENCE FROM MANUFACTURING FIRMS IN KOCAELI,
TÜRKIYE**



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TSD₃ 09:20 – 09:30

– Ahmet AYTEKİN¹, Mustafa ERGÜN², Selçuk KORUCUK³

¹Samsun University, Faculty of Political Sciences, Department of International Trade and Business Administration, Samsun, Türkiye,

²Giresun University, Bulancak School of Applied Sciences, Department of Logistics Management, Giresun, Türkiye,

³Giresun University, Bulancak School of Applied Sciences, Department of Logistics Management, Giresun, Türkiye

**AN APPLICATION FOR RANKING THE BARRIERS TO
SUSTAINABLE WASTE MANAGEMENT: THE CASE OF
MANUFACTURING FIRMS IN KOCAELİ, TÜRKİYE**

TSD₄ 09:30 – 09:40

– Alireza AGHAKHANI, Ágnes TAKÁCS

University of Miskolc, Institute of Machine and Product Design, Faculty of Mechanical Engineering and Informatics, Miskolc, Miskolc, Hungary

**TOPOLOGY OPTIMIZATION AS A PRACTICAL TOOL FOR
CIRCULAR ECONOMY IN MECHANICAL CONCEPTUAL DESIGN**

TSD₅ 09:40 – 09:50

– Karim ENNOURI

University of Sfax, Sfax, Tunisia

**BLOCKCHAIN TECHNOLOGY IN AGRICULTURE: REVIEW OF
APPLICATIONS, CHALLENGES, AND FUTURE DIRECTIONS**



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TSD6 09:50 – 10:00

– Massinissa BRAHAM¹, Abdelmadjid BOUFEKANE², Faouzi GHERBOUDJ¹, Hamid BOURENANE¹, Wafa KOUICI¹

¹National Center of Applied Research in Earthquake Engineering (CGS), Algiers, Algeria.

²Geo-Environment Laboratory, Department of Geology, Faculty of Earth Sciences and Country Planning (FSTGAT), University of Sciences and Technology Houari Boumediene (USTHB), Bab Ezzouar, Algiers, Algeria.

DATA-DRIVEN SPATIAL MAPPING OF EARTHQUAKE-INDUCED FLOOD RISK IN EASTERN ALGERIA USING MACHINE LEARNING

TSD7 10:00 – 10:10

– Mohammed ER-RAJY

LIMAS Laboratory, Faculty of Sciences Dhar El Mahraz, Sidi Mohamed Ben Abdellah University, Fez, Morocco.

DESIGN AND EVALUATION OF NEW TRIAZOLE DERIVATIVES AS POTENTIAL GOUT INHIBITORS

TSD8 10:10 – 10:20

– Seid AHMED¹, Girma MOGES²

¹Department of Leather Engineering, Ethiopian Institute of Textile and Fashion Technology, Bahir Dar University, Bahir Dar, Ethiopia,

²Department of Textile Engineering, Hawassa University Institute of Technology, Hawassa, Ethiopia

A REVIEW ON THE APPLICATIONS OF NANOTECHNOLOGY IN HID/SKIN PRESERVATION: CHALLENGES AND FUTURE PROSPECTS



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TSD9 10:20 – 10:30

– RAIMOT ADEJUMOKE ADEBAYO-ADEWUNMI

*Department of Biology, School of science and computing Education, Federal
College of Education (Technical) Akoka-Yaba, Lagos Nigeria*

**HEALTH AWARENESS ON EFFECTS AND PREVENTIVE STRATEGIES
TO CONTROL MYCOTOXINS CONTAMINATION FOR BIOLOGY
STUDENTS IN NIGERIA**



Xth. International Symposium-2026

II. Session:

10:00 – 10:15 *Special Session (Poster Session II.: Discussions)*

Publications and presentations are not necessary

<https://teams.microsoft.com/meet/378769867900222?p=FPy9qPkgciFlcvqdiy>

Chair of the Session: Hosam Bayoumi Hamuda

PNP₁

– **Asimamaw Nigusie ASITATIKIE**

University of Brescia, Ethiopia

MACHINE LEARNING APPROACH FOR ASSESSING FLOOD VULNERABILITY UNDER CHANGING CLIMATE AND LAND USE AND LAND COVER DYNAMICS IN RIBB AND GUMARA CATCHMENTS, LAKE TANA SUB-BASIN, ETHIOPIA

PNP₂

– **Adrien PUTEÁNI-HOLL**

Research Institute and Archives for the History of the Hungarian Regime Change, Budapest, Hungary

MOLD PREVENTION IN ARCHIVES

PNP₃

– **Viktoria STARODUB, Viktoria TSVIHUN**

Institute of Agroecology and Environmental Management of NAAS, Kyiv, Ukraine.

ADVENTIVE PLANT SPECIES AS DETERMINANTS IN THE FORMATION OF PHYTOPATHOGENIC VIRUS RESERVOIRS IN UKRAINIAN AGROCENOSSES



Xth. International Symposium-2026

PNP₄

– **Olunike BELLO**

Osun State College of Education, Ila-Orangun, Nigeria

AI AND SUSTAINABLE FORESTRY FOR GENETIC RESOURCES PRESERVATION

PNP₅

– **Yevheniia TKACH, Dmytro MUDRAK, Viktoriia STARODUB, Andrii KRYZHANIVSKYI**

Institute of Agroecology and Environmental Management of the National Academy of Agrarian Sciences of Ukraine, Kyiv, Ukraine

ASSESSMENT OF INVASIVE RISK IN PROTECTED AREAS OF EASTERN PODILLIA

PNP₆

– **Ashok POKHREL**

Bagmati University, Nepal

SPATIOTEMPORAL BIostatistical MODELING OF DRINKING WATER QUALITY, MICROBIAL CONTAMINATION, AND WATER-BORNE DISEASES IN RURAL AND MUNICIPAL AREAS

PNP₇

– **Radhia LEGRIOUI, Abdelmadjid BOUFEKANE, Assia BOUDJEBIEUR**

Geo-Environment Laboratory, Geology Department, Faculty of Earth Sciences, Geography and Planning, University of Sciences and Technology Houari Boumediene, Bab Ezzouar, Algeria

ASSESSMENT OF GROUNDWATER POLLUTION IN THE MIO-PLIO-QUATERNARY AQUIFER OF TADJENANET (NORTHEASTERN – ALGERIA)



Xth. International Symposium-2026

PNP8

– **Anatolii KARAS, Nazarii SUS**

Institute of Horticulture of the National Academy of Agrarian Sciences of Ukraine, Novosilky, Ukraine.

EFFECT OF ROOTING STIMULANTS ON THE REGENERATIVE CAPACITY OF HAZELNUT (CORYLUS MAXIMA MILL.)

PNP9

– **Alla NEKOS, Vitalii BEZSONNYI, Kateryna KHADUSKINA**

V.N. Karazin Kharkiv National University, Kharkiv, Ukraine,

MONITORING OF SURFACE WATER QUALITY OF SMALL TRIBUTORS OF THE SIVERSKIY DONTSY IN CONDITIONS OF MILITARY CONFLICT

PNP10

– **Mina M. ALJUBOURY¹, Hussein Abbas JEBUR²**

¹Department of Agricultural machinery technique, almussaib technical institute alfurat al-Awsat technical university, kufa, Iraq

²Department of Agricultural Machines and Equipment, College of Agricultural Engineering Sciences, Iraq.

QUALITY OF SORTING AND GRADING IRAQI LEMONS USING IMAGE PROCESSING AND ARTIFICIAL NEURAL NETWORK

PNP11

– **Surayyo XOLIKOVA**

Karshi State University, Uzbekistan

ASSESSMENT OF SOIL CONDITION IN PASTURE AREAS USING BIOINDICATOR PLANTS



Xth. International Symposium-2026

PNP₁₂

– **Oleg GLUKH, Ihor-Mykola MILOVYCH, Olesia SYMKANYCH**

Uzhhorod National University, Uzhhorod, Ukraine

**USE OF SENTINEL-1 SAR DATA FOR FOREST COVER ANALYSIS IN THE
TRANSCARPATHIAN REGION (UKRAINE)**

PNP₁₃

– **Dániel SZABÓ¹, Barbara SIMON², Zsolt BIRÓ¹, Csaba CENTERI¹**

¹Hungarian University of Agriculture and Life Sciences, Institute for Wildlife Management and Nature Conservation, Gödöllő, Hungary

²Hungarian University of Agriculture and Life Sciences, Institute of Agronomy, Gödöllő, Hungary

**NEW EARTHWORM AND SOIL DATA IN A NATURA 2000 PROTECTED FOREST
OF THE HUNGARIAN UNIVERSITY OF AGRICULTURE AND LIFE SCIENCES,
GÖDÖLLŐ, HUNGARY**

PNP₁₄

– **Sergii SUKHAREV, Ivan LUHOSH, Oksana SUKHAREVA**

State University “Uzhhorod National University”, Uzhhorod, Ukraine

PROBLEMS OF WATER RESOURCES OF SYNEVYR NATIONAL NATURE PARK

PNP₁₅

– **Mykhailo CHENCHAK, Stepan MILYOVICH**

Uzhhorod National University, Uzhhorod, Ukraine

**COMPARATIVE ANALYSIS OF AI MODELS FOR MONITORING
ENVIRONMENTAL SUSTAINABLE DEVELOPMENT GOALS IN UKRAINE**



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PNP₁₆

– **Jasmina AGUŠI, Vuk MIRČETIĆ**

*University Business Academy in Novi Sad, Faculty of Applied Management,
Economics and Finance, Belgrade, Serbia*

**UNEQUAL ACCESS TO HEALTHCARE AS A CHALLENGE TO SUSTAINABLE
DEVELOPMENT**

PNP₁₇

– **Liudmyla ROMAN, Oleg GLUKH, Stepan MILYOVICH**

*Department of Ecology and Environmental Protection of the Educational and
Research Institute of Chemistry and Ecology of Uzhhorod National University,
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**MONITORING THE DISTRIBUTION OF RARE SPECIES OF VASCULAR PLANTS
WITHIN THE BOUNDARIES OF UZHANSKIY NATIONAL NATURAL PARK**

PNP₁₈

– **Stepan MILYOVICH, Valentina VARVARENETS**

Uzhhorod National University, Uzhhorod, Ukraine

**REMOVAL OF PHOSPHATE IONS USING MODIFIED CLINOPTILOLITE OF
SOKYRNYTSYA DEPOSIT**

PNP₁₉

– **Ayoub BOUTAGHANE, Ouafi AMEUR-ZAIMECHE**

*Laboratoire des Réservoirs Souterrains: Pétroliers, Gaziers et Aquifères,
Université Kasdi Merbah Ouargla, Algeria*

**A COMPARATIVE ANALYSIS OF MACHINE LEARNING-BASED DENSITY
PREDICTION FROM WELL LOGGING AND MUD LOGGING DATA**



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– **Marina A. EFREMOVA, Anastasia A. LOHMATOVA**

1Saint-Petersburg State Agrarian University, Saint-Petersburg, Russia

**ACCUMULATION OF MERCURY AND CADMIUM IN WHITE MUSTARD UNDER
CONDITIONS OF INCREASED ZINC CONTENT IN SOD-PODZOLIC SOIL**

PNP₂₁

– **Alona BUNAS, Olena SHERSTOBOEVA, Yevheniia TKACH,
Igor MOVCHAN, Volodymyr DVORETSKYI**

*Institute of Agroecology and Environmental Management of the National
Academy of Sciences of the Ukrainian Academy of Sciences, Kyiv, Ukraine*

SOIL MICROBIOME AND CARBON CYCLING IN CEREAL AGROECOSYSTEMS

PNP₂₂

– **Kirill BONDARENKO, Alona BUNAS, Mykhailo
DVORETSKYI, Olena Olena DVORETSKA**

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Academy of Sciences of the Ukrainian Academy of Sciences, Kyiv, Ukraine*

**BIO-ORIENTED PLANT PROTECTION TECHNOLOGIES IN MODERN
AGRICULTURE**

PNP₂₃

– **Samet SOYKAN, Filiz ERSÖZ**

OSTIM Technical University, Ankara, Türkiye,

**AI-BASED CYBER ATTACK ANALYSIS AND TIME SERIES FORECASTING IN
NETWORK TRAFFIC**



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– **Shaila SHAREEF**

Department of Zoology, Hazara University, Mansehra, Khyber Pakhtunkhwa, Pakistan

PREVALENCE OF BREAST CANCER IN WOMEN ACROSS DIFFERENT AGE GROUPS IN THE VICINITY OF DISTRICT BATTAGRAM, KP, PAKISTAN

PNP25

– **Muhammad Bilal**

Department of Zoology, Hazara University Mansehra, Khyber Pakhtunkhwa, Pakistan

TAXONOMIC STUDY OF FISHES IN DISTRICT BATTAGRAM, KP, PAKISTAN

PNP26

– **Viktória Sima-Molnár**

Obuda University, Rejtő Sándor Faculty of Light Industry and Environmental Engineering, Budapest, Hungary

TRANSPARENCY TEXTILES IN SPATIAL DESIGN

PNP27

– **Csaba CENTERI, Zsolt BIRÓ, Krisztián KATONA, Natalia PITTA-OSSES**

Hungarian University of Agriculture and Life Sciences, Gödöllő, Hungary

EFFECTS OF EUROPEAN MOLE (TALPA EUROPAEA) ON THE SOIL PROPERTIES OF A BUSHY GRASSLAND, VÖRÖSKÖVÁR, HUNGARY: A SOIL DEGRADATION APPROACH

PNP28

– **Itana Ejeta GUDET**

Independent Researcher, Addis Ababa, Ethiopia

WHEN EMERGENCY BECOMES THE SYSTEM: INSTITUTIONAL TIMING AND DROUGHT GOVERNANCE



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– Abdellah ARFA¹, Boualem BOUSELSAL¹, Johnbosco C. EGBUERI^{2,3}

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³Research Management Office, Chukwuemeka Odumegwu Ojukwu University, Igbariam, Nigeria

ASSESSMENT OF GROUNDWATER QUALITY AND HYDROCHEMICAL EVOLUTION IN AN ARID DESERT REGION: CASE STUDY OF THE AQUIFER SYSTEM IN THE BÉNI OUNIF SYNCLINE (ALGERIA)



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III. Session:

Workshop Special Session:

10:15 – 11:15

Environmental Health and Climatic Change

<https://teams.microsoft.com/meet/378769867900222?p=FPy9qPkgciFlcvqdiy>

Chair of the Session: Hosam BAYOUMI HAMUDA

Keynote Speaker

– Hosam E.A.F. BAYOUMI HAMUDA

Institute of Environmental Engineering and Natural Sciences, Rejto Sandor Faculty of Light Industry and Environmental Engineering, Obuda University, Budapest, Hungary

The main aim of this Workshop is making strides in solving some of the world's greatest challenges and transforming industries across climate, health, learning, food systems, and exploration as the main points for the human and global environmental sustainability.



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IV. Session:

Continuation of A, B, C, D, E, and Poster sessions

11:15 – 12:00

<https://teams.microsoft.com/meet/378769867900222?p=FPy9qPkgciFlcvqdiy>

Chair of the Session: Hosam BAYOUMI HAMUDA

12:15

Closing Ceremony



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ICEEE-Cooperation

Our planet requires an array of scientific innovations, and it's time to look beyond the traditional problems and solve them. This is the critical and exciting time to be alive. The decisions and the actions we take in the next years will define the future for next generations to come. These solutions can be done from practical and not only excellent from theoretical point of view.

From our vision, the main task of the members of our International Council of Environmental Engineering Education board (ICEEE) and their voice, passion, and cooperation are critical to our success.

Please join us to create the future for the new generations free from environmental problems like climatic changes, pollutions, spread of epidemic diseases, reduction in the natural resources, etc., due to the continuous increasing in the global population and depending on the 17 points of sustainable development from United Nations.

With your support, ICEEE can try and continue to solve problems from around the world and to find solutions, catalyze global impact, and create the future we envision.

Prof. Dr. Hosam Bayoumi Hamuda

President of ICEEE

Chairman of the Conference

Obuda University

Budapest - Hungary

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