

## REPORT

### **TwINSol-CECs International Conference on Environmental and Sustainable Research Solutions with 3<sup>rd</sup> TwINSol-CECs Workshop** *Novi Sad, June 5 - 7, 2025*

The TwINSol-CECs International Conference on Environmental and Sustainable Research Solutions was held from June 5 to 7, 2025, in Novi Sad, Serbia, as the final dissemination event of the Horizon Europe project TwINSol-CECs (GA 101059867). Organized by the Faculty of Technology Novi Sad (TFNS) and hosted at the Chamber of Commerce and Industry of Vojvodina, the event brought together more than 70 participants from 7 countries, including leading scientists, project partners, esteemed researchers, and early-stage researchers. The conference served as the concluding point of the TwINSol-CECs project's dissemination activities and presented some of the key outcomes of the initiative. The event also reflected the project's commitment to fostering international collaboration and creating long-term scientific partnerships.

The conference was initially planned to take place at the Faculty of Technology Novi Sad. However, due to the ongoing student blockade of the Faculty, which began in the first half of December 2024 and whose duration remained uncertain during the organization phase of the event, alternative locations were carefully considered in order to avoid potential disruptions. As a result, and in agreement with the Chamber of Commerce and Industry of Vojvodina, it was decided to hold the conference at their premises in Novi Sad. This solution provided a stable and professional setting, allowing for the successful realization of all planned sessions and activities. Due to the relocation of the event from Faculty of Technology Novi Sad to the Vojvodina Chamber of Commerce and Industry, visits to the TwINSol-CECs laboratories were replaced by a dedicated interactive session where participants had the opportunity to meet the research teams and to discuss the capacities of the laboratories in front of the poster presentations on the equipment and project research activities.

This international scientific gathering was followed with two satellite events, and in this way it was conceptualized as a triple event, combining:

- the TwINSol-CECs International Conference (June 5-7, 2025),
- the 3<sup>rd</sup> TwINSol-CECs Workshop (June 5-6, 2025),
- the 2<sup>nd</sup> FERTILEAVES Workshop (June 5, 2025), co-organized within the Interreg VI-A IPA Hungary-Serbia Programme (HUSRB/23S/11/027).

As part of the conference, the 3<sup>rd</sup> TwINSol-CECs Workshop was held with the aim of presenting the TwINSol-CECs project's infrastructure and research, keeping in mind that over the past three years, the project significantly enhanced the scientific infrastructure and research capacities of TFNS in the field of environmental protection, particularly with regard to Contaminants of Emerging Concern (CECs). The 3<sup>rd</sup> Workshop included showcasing the technical resources acquired through the project, as well as the project research activities carried out at the Faculty of Technology Novi Sad. The workshop was also intended to act as a platform for networking and fostering new collaborations,

while raising awareness about the capabilities and resources available at our institution for future joint scientific endeavors. For the purposes of the 3rd TwiNSol-CECs Workshop, a dedicated 24-page project brochure was prepared and printed, presenting the material and human capacities developed through the project, as well as its main topics, activities, and achievements. The brochure was included as an integral part of the registration package distributed to all participants.

In this spirit of collaboration and knowledge sharing, the TwiNSol-CECs and FERTILEAVES project teams have joined forces to host in parallel the TwiNSol-CECs Conference and the 2<sup>nd</sup> FERTILEAVES Workshop (FERTILEAVES project, HUSRB/23S/11/027, Interreg VI-A IPA Hungary–Serbia Programme), recognizing the importance of enhancing the visibility and impact of both initiatives. The joint session of two projects reflected the shared commitment of the two projects, both involving TFNS researchers active in the analysis of emerging contaminants, to addressing environmental and sustainability challenges.

The Chairs of the Conference were Prof. Dr. Nataša Đurišić-Mladenović (TwiNSol-CECs Coordinator), Dr. Jelena Živančev (FERTILEAVES Coordinator and TwiNSol-CECs WP4 co-leader), and Prof. Zita Šereš (TwiNSol-CECs Project Manager for Strategic Issues and Acting Dean of TFNS), while the Scientific Committee of the Conference consisted of researchers from 6 countries (in alphabetic order):

Dr. Igor Antić, University of Novi Sad, Faculty of Technology Novi Sad, Serbia  
Prof. Marco Barbanera, University of Tuscia, Italy  
Prof. Joao Crespo, NOVA University Lisbon, NOVA School of Science and Technology, Portugal  
Dr. Marinella Farre, Department of Environmental Chemistry, IDAEA-CSIC, Spain  
Dr. Cláudia Galinha, NOVA University Lisbon, NOVA School of Science and Technology, Portugal  
Dr. Ferenc Kiss, University of Novi Sad, Faculty of Technology Novi Sad, Serbia  
Prof. Laszlo Kredics, University of Szeged, Faculty of Science and Informatics, Hungary  
Dr. Marta Llorca, Department of Environmental Chemistry, IDAEA-CSIC, Spain  
Dr. Dragana Lukić, University of Novi Sad, Faculty of Technology Novi Sad, Serbia  
Dr. Nikola Maravić, University of Novi Sad, Faculty of Technology Novi Sad, Serbia  
Dr. Nicola Montemurro, Department of Environmental Chemistry, IDAEA-CSIC, Spain  
Prof. Biljana Pajin, University of Novi Sad, Faculty of Technology Novi Sad, Serbia  
Dr. Sanja Panić, University of Novi Sad, Faculty of Technology Novi Sad, Serbia  
Dr. Sandra Pérez, Department of Environmental Chemistry, IDAEA-CSIC, Spain  
Dr. Mirjana Petronijević, University of Novi Sad, Faculty of Technology Novi Sad, Serbia  
Prof. Csaba Vagvolgyi, University of Szeged, Faculty of Science and Informatics, Hungary  
Dr. Vesna Vasić, University of Novi Sad, Faculty of Technology Novi Sad, Serbia  
Prof. Natalija Velić, Faculty of Food Technology Osijek, University of Osijek, Croatia

The members of the Organizing Committee were (in alphabetic order):

Dr. Maja Buljovčić, University of Novi Sad, Faculty of Technology Novi Sad, Serbia  
Dr. Ivana Lončarević, University of Novi Sad, Faculty of Technology Novi Sad, Serbia  
Dr. Ivana Nikolić, University of Novi Sad, Faculty of Technology Novi Sad, Serbia  
Dr. Jovana Petrović, University of Novi Sad, Faculty of Technology Novi Sad, Serbia  
Dušan Rakić, MSc, University of Novi Sad, Faculty of Technology Novi Sad, Serbia  
Prof. Dragana Šoronja-Simović, University of Novi Sad, Faculty of Technology Novi Sad, Serbia  
Jelena Šurlan MSc, University of Novi Sad, Faculty of Technology Novi Sad, Serbia.

The conference program featured a total of 16 oral presentations and 25 poster presentations, alongside 1 keynote lecture, 3 plenary lectures, and 5 invited lectures delivered by leading experts from Europe and Serbia. The Conference sessions covered a broad spectrum of themes related to sustainable environmental solutions, advanced analytical methods, environmental biotechnology, remediation of emerging contaminants, circular economy, and environmental health risks.

An electronic version of the Conference Book of Abstracts was published one day prior to the start of the Conference, after the deadline by which registered participants had provided their consent for online publication of their abstracts on the project website and in the Zenodo repository. The Book was published with ISBN and catalogization data obtained in accordance to the official procedure for Cataloguing in Publication (CIP) by the Matica Srpska Library. The Book of Abstracts is available on the internet page of TwiNSol-CECs project:

[https://twinsol-cecs.com/images/documents/book\\_of\\_abstracts\\_final\\_twinsol-cecs\\_conference.pdf](https://twinsol-cecs.com/images/documents/book_of_abstracts_final_twinsol-cecs_conference.pdf)

and it has been also uploaded to the open repository Zenodo:

<https://zenodo.org/records/15606184>

At the beginning of the conference, welcome addresses were delivered by the coordinators of the TwiNSol-CECs and FERTILEAVES projects, Prof. Nataša Đurišić-Mladenović and Dr. Jelena Živančev, respectively. It was noted that, due to the challenging circumstances and difficult conditions currently affecting faculties and universities across Serbia, requiring the continuous presence of institutional leadership and ongoing dialogue and meetings with employees and students, none of the representatives from the leadership of the Faculty of Technology Novi Sad were able to attend the opening session. On their behalf, Prof. Nataša Đurišić-Mladenović conveyed the greetings and words of support from the Acting Dean of TFNS, Prof. Zita Šereš, the Acting Vice-Deans, Prof. Jelena Pejin and Prof. Sunčica Kocić-Tanackov, as well as from Prof. Biljana Pajin, TwiNSol-CECs Project Manager for Administrative, Financial, and Legal Issues, WP6 Leader, who is also Vice-Rector for Science and Art at the University of Novi Sad, extending their best wishes for a successful conference and a productive exchange of knowledge.

The morning session of the first conference day was joint session of two projects, TwiNSol-CECs and FERTILEAVES entitled „Environmental and Sustainable Solutions Through Biotechnological Approaches“. It featured oral presentations by colleagues from the University of Szeged and the Faculty of Technology Novi Sad participating in the FERTILEAVES project, as well as contributions from other participants registered for the TwiNSol-CECs Conference, whose presentations were focused on sustainable agriculture, crop resilience, microbial applications for plant protection, and other biotechnology-driven research solutions. The plenary lecture „*Phytomicrobiome as the source of beneficial bacteria and fungi for the alleviation of drought stress in agricultural crops*“ was given by FERTILEAVES researchers Prof. László Kredics. The first oral presentation session discussed innovations in climate-resilient crop breeding, presenting sustainable strategies to improve sunflower's drought tolerance and nutritional quality. The second oral presentation session highlighted sustainable agricultural innovations, including the integration of emerging contaminant analysis into the FERTILEAVES pilot study, the use of Bacillus-based technology to boost sweet potato growth and yield, and the application of a digestate- and Bacillus-based circular soil amendment to support early tomato development.

In addition to the joint session held in collaboration with the 2nd Workshop of the FERTILEAVES project, the first day of the conference continued with an afternoon session dedicated to environmental research solutions. This session commenced with a plenary lecture delivered by Dr. Claudia Galinha from the partner institution LAQV-REQUIMTE, NOVA School of Science and Technology, Universidade NOVA de Lisboa, entitled *"From data to action: advancing water treatment and monitoring with AI."* Her lecture was followed by an invited presentation by Prof. Natalija Velić from the Faculty of Food Technology Osijek, University of Osijek, entitled *"Food industry by-products as biosorbents for pollutant removal."*

The second day started with the joint poster session of the Conference and the 3<sup>rd</sup> Workshop, while the TwiNSol-CECs coordinator, Prof. Đurišić-Mladenović, was one of the hosts of the of the breakout session "Unlocking Opportunities: Leveraging Horizon Europe Twinning for Career Growth" during the TwinSubDyn Summer School on Sustainable Organic Amendment Applications from a Soil and Ground Water Management Perspective - Learning, Training, and Knowledge Exchange Activity (<https://twinsubdyn.pmf.uns.ac.rs/summerschool.html>). It was an inspiring session designed for early-stage researchers to learn more about what Twinning projects are and what opportunities they offer for young scientists.

The afternoon session of the TwiNSol-CECs Conference addressed pressing environmental issues, including the detection and transformation of micro- and nanoplastics, PFAS substances, and persistent and mobile organic pollutants in various environmental matrices. Special attention was given to analytical advances in LC-HRMS screening, wastewater analysis, and the environmental and human health implications of CEC exposure. The discussion also included the application of biochar in soil remediation. The day started with poster session, while the afternoon session started with plenary lecture of Dr. Marinella Farre entitled *"Micro- and nanoplastics: from the environment to humans"*. Dr. Farre is the TwiNSol-CECs project manager at the partner institution IDAEA-CSIC, Barcelona, Spain.

Afterwards, Prof. Dimitra Lambropoulou from the Department of Chemistry, Aristotle University of Thessaloniki, and the Centre for Interdisciplinary Research and Innovation (CIRI-AUTH), Balkan Center, Thessaloniki, Greece, delivered an invited lecture titled *"Wide-scope screening of emerging contaminants and their transformation products in wastewaters by using liquid chromatography high-resolution mass spectrometry"*. Prof. Lambropoulou coordinates the newly launched Twinning project SPECTRA (GA 101158453), which focuses on improving water quality, food safety, and environmental sustainability across the Mediterranean. This was followed by the invited lecture of Prof. Vladimir Beškoski, titled *"PFAS: From useful chemicals to environmental hot topic – solving the (bio)degradation puzzle"*. Prof. Beškoski is the coordinator of the Horizon Europe Western Balkans Twinning project PFAStwin (GA 101059534). Given the thematic alignment among SPECTRA, PFAStwin, and TwiNSol-CECs, particularly in the field of emerging environmental contaminants and related advanced analytical and remediation methodologies, the participation of these Twinning project coordinators offered an excellent opportunity for exchanging experiences on project implementation and discussing possibilities for future collaboration. These three twinning projects were also the hosts of the above mentioned breakout session on Horizon Europe Twinning projects with other two twinning project, TwinSubDyn (GA 101059546) and SmartWaterTwin (GA 101060110). Afternoon oral presentations explored strategies for reducing and monitoring environmental pollution, including the use of biochar to limit ionizable organic pollutant transport in alluvial soils, passive sampling for

tracking PFAAs in wastewater, and biomonitoring arsenic exposure in lung cancer patients in Vojvodina.

On the evening of the second day, the official TwiNSol-CEC dinner was organized for the invited lecturers as a networking event provided an opportunity to further discuss complementarities among the projects they are currently coordinating, as well as shared research interests that could potentially be explored in the future. Events planned to be organized in the upcoming period within SPECTRA and ZeroPM (GA 101036756) projects were discussed as possible follow-up networking opportunities.

The third and final day of the conference began with the keynote lecture titled *“Confronting the Threat of TFA and Other Persistent and Mobile Substances to Protect Water Resources”* delivered by Prof. Hans Peter Arp from the Norwegian Geotechnical Institute (NGI), Oslo, and the Norwegian University of Science and Technology (NTNU), Trondheim, Norway. Prof. Arp serves as the primary coordinator contact for the Horizon 2020 project ZeroPM. This was followed by an invited lecture by Prof. Snežana Maletić from the University of Novi Sad, Faculty of Sciences, Department of Chemistry, Biochemistry and Environmental Protection, titled *“Carbon-Based Amendments Advancing Sustainable Solutions for Contaminated Environments”*. Prof. Maletić is the coordinator of the Horizon Europe Western Balkans Twinning project TwinSubDyn. These presentations were followed by oral presentations on the life cycle assessment of sewage sludge valorization, advanced oxidation processes, heterogeneous photocatalysis for pharmaceutical degradation, and novel remediation strategies targeting persistent pollutants, including perfluorinated compounds.

During participant registration, each attendee received a registration package, free of charge, contained in a project-branded bag, which included a project notebook, pencil, folder, the project brochure, the conference program, and a name tag. A special gift for the invited lecturers and representatives of the project partner institutions was a custom-designed umbrella and a USB drive. While this token of appreciation was reserved for key contributors to the TwiNSol-CEC project, all registered participants were sincerely acknowledged for their valuable presence and engagement throughout the conference. All promotional and registration materials featured the required EU and project logos. Before signing the attendance list, all participants were informed that by signing the list they would also grant the permission and consent to TwiNSol-CECs team for the use of the any photograph(s) or electronic media images taken/made at the TwiNSol-CECs Conference for presentation under any legal use.

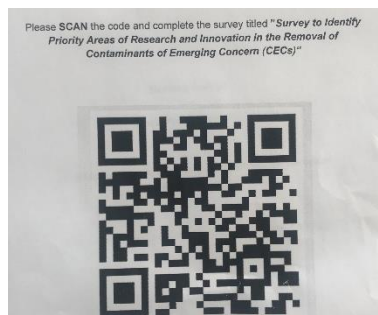
Attendees were informed about a questionnaire „Survey to identify Priority Areas of Research and Innovation in the Removal of Contaminants of Emerging Concern (CECs)” prepared by the TwiNSol-CEC. This questionnaire is intended for various groups, including the general public, experts from different sectors, and anyone with an interest or influence in the field of environmental protection. The results are expected to contribute to the development of future research strategies of the TwiNSol-CEC research group. Conference participants were kindly invited to use the QR code available at the venue to complete the questionnaire and thereby support the outcomes of the TwiNSol-CEC project.

PhD students from the TwiNSol-CEC team, Jelena Šurlan and Dušan Rakić, conducted interviews with the invited speakers, focusing on their involvement in the project, the relevance of their presentations, current challenges in CEC-related research, stakeholder engagement, and the



transition from research to practical implementation of innovative solutions. The interviews were recorded as part of the project's communication activities, with the aim of promoting knowledge exchange and creating a lasting resource for future research and collaboration.

Selected photographs from the event are included in Annex II, while Annex I contains the final scientific programme.



*Information for the Conference participants about QR code for the questionnaire on identifying priority areas of research and innovation in the removal of Contaminants of Emerging Concern*



Cover page of the TwiNSol-CECs International Conference on Environmental and Sustainable Research Solutions available at

[https://twinsol-cecs.com/images/documents/book\\_of\\_abstracts\\_final\\_twinsol-cecs\\_conference.pdf](https://twinsol-cecs.com/images/documents/book_of_abstracts_final_twinsol-cecs_conference.pdf)

and

<https://zenodo.org/records/15606184>

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## Annex I

**TwINSol-CECs International Conference on  
Environmental and Sustainable Research Solutions, June 5-7, 2025  
with satellites**

**3<sup>rd</sup> TwINSol-CECs Workshop, June 5-6, 2025**

**2<sup>nd</sup> FERTILEAVES Workshop “Sustainable Solutions Through Biotechnological Approaches”, June 5, 2025**

**Organized by**

**University of Novi Sad, Faculty of Technology Novi Sad (FoTNS), Serbia**

### PROGRAM

**Thursday, June 5, 2025**

	Venue: Chamber of Commerce and Industry of Vojvodina, Braće Popović 5, Novi Sad
9.30-10.30	Registration
10.30-10.45	Welcome and opening speeches by the Conference Co-Chairs, Zita Šereš, Acting Dean, TwINSol-CECs Project Manager for Strategic Issues, FoTNS Jelena Živančev, FERTILEAVES Coordinator, FoTNS Nataša Đurišić-Mladenović, TwINSol-CECs Coordinator, FoTNS
<b>TwINSol-CECs and FERTILEAVES Joint Session: Environmental and Sustainable Solutions Through Biotechnological Approaches</b>	
<b>Session Chairs: Csaba Vágvölgyi and Jelena Živančev</b>	
<i>Plenary lecture</i>	
10.45-11.15	Phytomicrobiome as the source of beneficial bacteria and fungi for the alleviation of drought stress in agricultural crops <b>László Kredics</b> , Orsolya Kedves, Tamás Marik, Csaba Vágvölgyi Department of Biotechnology and Microbiology, Faculty of Science and Informatics, University of Szeged, Szeged, Hungary
<i>Oral presentations</i>	
11.15-11.30	Innovations in climate-resilient crop breeding <b>Aleksandra Radanović</b> , Sandra Cvejić, Dragana Rajković, Boško Dedić, Biljana Kiprovska, Maja Tanasković, Miloš Krstić, Jelena Ovuka, Sonja Gvozdenac, Sonja Tančić-Živanov, Nemanja Čuk, Verica Zelić, Dušan Dunderski, Jelena Jocković, Milan Jocković, Milan Miroslavljević, Siniša Jocić, Goran Bekavac, Ana Marjanović-Jeromela, Ankica Kondić-Špika, Dragana Miladinović Institute of Field and Vegetable Crops, National Institute of the Republic of Serbia, Novi Sad, Serbia
11.30-11.45	Sunflower under stress: sustainable breeding solutions for drought adaptation and nutrition quality improvement <b>Sandra Cvejić</b> , Boško Dedić, Aleksandra Radanović, Nada Grahovac, Milan Jocković, Nemanja Čuk, Jelena Jocković, Sonja Gvozdenac, Srđan Bursać, Siniša Jocić, Dragana Miladinović, Vladimir Miklič Institute of Field and Vegetable Crops, National Institute of the Republic of Serbia, Novi Sad, Serbia
11.45-12.00	Refreshments
<i>Oral presentations</i>	
12.00-12.15	Development of biorational methods for seed protection during storage against biotic and abiotic stressors <b>Sonja Gvozdenac</b> <sup>1</sup> , Jelena Ovuka <sup>1</sup> , Miloš Krstić <sup>1</sup> , Aleksandra Ilić <sup>1</sup> , Nevena Nagl <sup>1</sup> , Dušan Stanisavljević <sup>1</sup> , Aleksandra Nastasić <sup>1</sup> , Vladimir Miklič <sup>1</sup> , Milica Škorić <sup>1</sup> , Dejan Prvulović <sup>2</sup> , Radenka Kolarov <sup>2</sup> , Snežana Tanasković <sup>3</sup> , Dušan Marković <sup>3</sup> , Zagorka Lozanov-Crvenković <sup>4</sup> <sup>1</sup> Institute of Field and Vegetable Crops, National Institute of the Republic of Serbia, Novi Sad, Serbia <sup>2</sup> University of Novi Sad, Faculty of Agriculture, Novi Sad, Serbia <sup>3</sup> University of Kragujevac, Faculty of Agronomy, Čačak, Serbia <sup>4</sup> University of Novi Sad, Faculty of Sciences, Novi Sad, Serbia

- 12.15-12.30 Bioactive ecdysteroid analogues: cinnamate esters and *tert*-butyl oxime ethers with antitrypanosomal properties  
**Márton Háznagy**<sup>1</sup>, Máté Vágvölgyi<sup>1</sup>, Gábor Girst<sup>1</sup>, Sandhya R. Krishnan<sup>2</sup>, Kaushavi Cholke<sup>2</sup>, Jürg Gertsch<sup>2</sup>, Attila Hunyadi<sup>1,3</sup>  
<sup>1</sup>Institute of Pharmacognosy, Faculty of Pharmacy, University of Szeged, Szeged, Hungary  
<sup>2</sup>Institute of Biochemistry and Molecular Medicine, Faculty of Medicine, University of Bern, Bern, Switzerland  
<sup>3</sup>Interdisciplinary Centre for Natural Products, University of Szeged, Szeged, Hungary
- 12.30-12.45 Protoflavonoids: Exploring the non-tumor-related bioactivities of a rare group of natural products  
**Máté Vágvölgyi**<sup>1</sup>, George Anis Al-Qassab<sup>1</sup>, Gábor Girst<sup>1</sup>, Gabriella Spengler<sup>2</sup>, Attila Hunyadi<sup>1,3</sup>  
<sup>1</sup>Institute of Pharmacognosy, Faculty of Pharmacy, University of Szeged, Szeged, Hungary  
<sup>2</sup>Department of Medical Microbiology and Immunobiology, Faculty of Medicine, University of Szeged, Szeged, Hungary  
<sup>3</sup>Interdisciplinary Centre for Natural Products, University of Szeged, Szeged, Hungary
- 12.45-14.00 Lunch break  
*Oral presentations*
- 14.00-14.15 Tracking Emerging Contaminants in Soil: Integrating pollutant analysis into FERTILEAVES pilot study  
**Dušan Rakić**, Igor Antić, Maja Buljović, Nataša Đurišić-Mladenović, Jelena Živančev  
University of Novi Sad, Faculty of Technology Novi Sad, Novi Sad, Serbia
- 14.15-14.30 Innovative *Bacillus*-based technology for plant growth promotion and yield enhancement in sweet potato farming  
**Ádám Bordé-Pavlicz**<sup>1</sup>, Tamás Monostori<sup>2</sup>, László Kredics<sup>1</sup>, Nataša Đurišić-Mladenović<sup>3</sup>, Jelena Živančev<sup>3</sup>, Csaba Vágvölgyi<sup>1</sup>  
<sup>1</sup>Department of Biotechnology and Microbiology, Faculty of Science and Informatics, University of Szeged, Szeged, Hungary  
<sup>2</sup>Institute of Plant Sciences and Environmental Protection, Faculty of Agriculture, University of Szeged, Hódmezővásárhely, Hungary  
<sup>3</sup>University of Novi Sad, Faculty of Technology Novi Sad, Novi Sad, Serbia
- 14.30-14.45 The potential of digestate- and *Bacillus*-based circular soil amendment to enhance early tomato development,  
**Tatjana D. Dujković**, Ivana S. Danilov, Vanja R. Vljakov, Jovana A. Grahovac  
University of Novi Sad, Faculty of Technology, Novi Sad, Serbia
- 14.45-15.00 Coffee break  
**TwINSol-CECs Session: Environmental Research Solutions**  
**Session Chairs: Marinella Farre and Zita Šereš**
- Plenary lecture*
- 15.00-15.30 From data to action: advancing water treatment and monitoring with AI  
**Claudia F. Galinha**  
LAQV-REQUIMTE, Chemistry Department, NOVA School of Science and Technology, Universidade NOVA de Lisboa, Caparica, Portugal
- Invited lectures*
- 15.30-15.50 Degradation of bioplastics and related compounds in a conventional WWTP process by activated sludge  
**Marta Llorca**<sup>1</sup>, David Alcaide-Benavides<sup>1,2</sup>, Eloy Torres<sup>1</sup>, Marinella Farré<sup>1</sup>  
<sup>1</sup>ON HEALTH Research Group, Environmental Chemistry Department, IDAEA-CSIC, Barcelona, Spain  
<sup>2</sup>Doctoral Programa in Analytical Chemistry and Environmental Science, Dep. Of Chemical Engineering and Analytical Chemistry, University of Barcelona, Barcelona, Spain
- 15.50-16.10 Embracing circular economy principles in wastewater treatment: by-products from the food industry as effective biosorbents for pollutant removal  
**Natalija Velić**<sup>1</sup>, Marija Stjepanović<sup>1</sup>, Marta Ostojčić<sup>1</sup>, Darko Velić<sup>1</sup>, Janez Gorenšek<sup>2</sup>, Sandra, Budžaki<sup>1</sup>  
<sup>1</sup>University of Osijek, Faculty of Food Technology Osijek, Osijek, Croatia



<sup>2</sup> IAMB-Institute for Applied Mycology and Biotechnology, Celje, Slovenia

**13.00-17.00 3<sup>rd</sup> TwINSol-CECs Workshop - TwINSol-CECs capacities and results - interactive session with project teams**

*Due to the relocation of the event from Faculty of Technology Novi Sad to the Vojvodina Chamber of Commerce and Industry, visits to the TwINSol-CECs laboratories will be replaced by a dedicated interactive session where participants can meet the research teams, discuss the capacities of the laboratories in front of the poster presentations on the equipment and project research activities.*

**Friday, June 6, 2025**

	Venue: Chamber of Commerce and Industry of Vojvodina, Braće Popović 5, Novi Sad
10.30-11.00	Registration
11.00-13.30	<b>Joint poster session of the TwINSol-CECs Conference<sup>1</sup> and the 3<sup>rd</sup> TwINSol-CECs Workshop</b> (set-up Friday, June 6, 10.30-11.00, dismantling on Friday, June 6, 16.30-17.00, or Saturday, June 7, 12.45-13.30)
13.30-14.30	Lunch break

**TwINSol-CECs Session: Environmental Research Solutions  
Session Chairs: Marta Llorca and Igor Antić**

Plenary lecture

14.30-15.00	Micro- and nanoplastics: from the environment to humans <b>Marinella Farré<sup>1</sup></b> , David Alcaide <sup>1</sup> , Eloy Torres <sup>1</sup> , Xavier Borrell <sup>1</sup> , and Marta Llorca <sup>1</sup> <sup>1</sup> On-Health Research group, Institute of Environmental Assessment and Water Research (IDAEA), CSIC, C. Jordi Girona, 18-26, Barcelona, 08034, Spain
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Invited lecture

15.00-15.20	Wide-scope screening of emerging contaminants and their transformation products in wastewaters by using liquid chromatography high-resolution mass spectrometry <b>Dimitra A. Lambropoulou<sup>1,2</sup></b> <sup>1</sup> Department of Chemistry, Aristotle University of Thessaloniki, Thessaloniki, Greece <sup>2</sup> Centre for Interdisciplinary Research and Innovation (CIRI-AUTH), Balkan Center, Thessaloniki, Greece
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15.20-15.35	Coffee break
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Invited lecture

15.35-15.55	PFAS from useful chemicals to environmental hot topic - solving the (bio)degradation puzzle <b>Vladimir Beškoski</b> University of Belgrade – Faculty of Chemistry, Belgrade, Serbia
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Oral presentations

15.55-16.10	Passive but promising: passive sampling of per- and polyfluoroalkyl acids (PFAAS) in wastewater <b>Kristina Mraz<sup>1</sup></b> , Antonin Halek <sup>1</sup> , Veronika Svobodova <sup>1</sup> , Vaclav Janda <sup>1</sup> , Jana Pulkrabova <sup>1</sup> , Jakub Hejnic <sup>2</sup> , Martin Srb <sup>2</sup> , Darina Dvorakova <sup>1</sup> , Vojtech Kouba <sup>1</sup> <sup>1</sup> University of Chemistry and Technology Prague, Prague, Czech Republic <sup>2</sup> Prague Water Supply and Sewerage Company, Prague, Czech Republic
16.10-16.25	Mitigating transport of ionizable organic pollutants in alluvial soils using biochar <b>Tamara B. Apostolović<sup>1</sup></b> , Marijana M. Kragulj Isakovski <sup>1</sup> , Marko D. Šolić <sup>1</sup> , Jelena M. Beljin <sup>1</sup> , Irina B. Jevrosimov <sup>1</sup> , Snežana P. Maletić <sup>1</sup> <sup>1</sup> University of Novi Sad, Faculty of Sciences, Department of Chemistry, Biochemistry and Environmental Protection, Novi Sad, Serbia
16.25-16.40	Biomonitoring of non-occupational arsenic exposure among advanced lung cancer patients in Vojvodina <b>Nataša Milošević<sup>1</sup></b> , Danica Sazdanić-Velikić <sup>2</sup> , Mirjana Ševo <sup>3,4</sup> , Danijela Lukić <sup>5</sup> , Maja Milanović <sup>1</sup> , Nataša Milić <sup>1</sup>

<sup>1</sup> For the list of poster presentations, please refer to the end of the program.

- <sup>1</sup>University of Novi Sad, Faculty of Medicine, Department of Pharmacy, Novi Sad, Serbia  
<sup>2</sup>University of Novi Sad, Faculty of Medicine, Institute for Pulmonary Diseases of Vojvodina, Clinic for Pulmonary Oncology, Sremska Kamenica, Serbia  
<sup>3</sup>University of Novi Sad, Faculty of Medicine, Novi Sad, Serbia  
<sup>4</sup>IMC Banja Luka-Center of Radiotherapy, Part of Affidea Group, Banja Luka, Bosnia and Herzegovina  
<sup>5</sup>Institute of Public Health of Vojvodina, Novi Sad, Serbia

**13.00-17.00 3<sup>rd</sup> TwINSol-CECs Workshop - TwINSol-CECs capacities and results - interactive session with project teams**

**Saturday, June 7, 2025**

9.30-10.00	Venue: Chamber of Commerce and Industry of Vojvodina, Braće Popović 5, Novi Sad Registration
<b>Session: Environmental Research Solutions</b> <b>Session Chairs: Claudia Galinha and Nataša Đurišić-Mladenović</b>	
<u>Key-note lecture</u>	
10.00-10.45	Confronting the threat of TFA and other persistent and mobile substances to protect water resources <b>Hans Peter H. Arp</b> <sup>1,2</sup> <sup>1</sup> Norwegian Geotechnical Institute (NGI), Oslo, Norway, <sup>2</sup> Norwegian University of Science and Technology (NTNU), Trondheim, Norway
<u>Invited lecture</u>	
10.45-11.05	Carbon based amendments advancing sustainable solutions for contaminated environmental matrices <b>Snežana Maletić</b> , Jelena Beljin, Irina Jevrosimov, Tamara Apostolović, Srđan Rončević, Marijana Kragulj Isakovski University of Novi Sad, Faculty of Sciences, Department of Chemistry, Biochemistry and Environmental Protection, Novi Sad, Serbia
11.05-11.20	Coffee break
<u>Oral presentations</u>	
11.20-11.35	Comparative life cycle assessment of sewage sludge management options in Serbia <b>Ferenc E. Kiss</b> <sup>1</sup> , Djurdja V. Kerkez <sup>2</sup> , Milena R. Bečelić-Tomin <sup>2</sup> , Anita S. Leovac Maćerak <sup>2</sup> , Vesna Ž. Pešić <sup>2</sup> <sup>1</sup> University of Novi Sad, Faculty of Technology Novi Sad, Novi Sad, Republic of Serbia <sup>2</sup> University of Novi Sad, Faculty of Sciences, Novi Sad, Republic of Serbia
11.35-11.50	UV/Chlorine process for degradation of Ibuprofen and Trimethoprim in aqueous solutions <b>Anett Čović</b> , Luca Farkas, Teodóra Dragić and Tünde Alapi Department of Molecular and Analytical Chemistry, University of Szeged, Hungary
11.50-12.05	From capture to destruction: a two-step concept for PFOA remediation in aqueous systems <b>Kristina K. Kasalica</b> <sup>1</sup> , Marija M. Lješević <sup>1</sup> , Bojana B. Marković <sup>1</sup> , Nenad N. Radić <sup>1</sup> , Jelena J. Radulović <sup>3</sup> , Vladimir V. Bešković <sup>2</sup> <sup>1</sup> University of Belgrade - Institute for Chemistry, Technology and Metallurgy, National Institute of the Republic of Serbia, Njegoševa 12, Belgrade, Serbia, *kristina.kasalica@ihtm.bg.ac.rs <sup>2</sup> University of Belgrade – Faculty of Chemistry, Studentski trg 12-16, Belgrade, Serbia <sup>3</sup> Anahem LTD, Belgrade, Serbia
12.05-12.20	The investigation of the radical set in persulfate ions assisted heterogeneous photocatalysis <b>Bence Veres</b> , Tünde Alapi Department of Molecular and Analytical Chemistry, University of Szeged, Szeged, Hungary
12.20-12.35	Investigation of the efficiency of melamine-modified biochar-based photocatalysts in Persulfate-based AOPs for Trimethoprim Degradation <b>Dinesh Chandola</b> <sup>1</sup> , Gabor Varga <sup>2</sup> , Zsuzsanna László <sup>3</sup> and Tünde Alapi <sup>1</sup> <sup>1</sup> Department of Molecular and Analytical Chemistry, University of Szeged, Szeged, Hungary <sup>2</sup> Department of Physical Chemistry and Material Science, University of Szeged, Szeged, Hungary

12.35-12.40

<sup>3</sup>Department of Biosystem Engineering, Faculty of Engineering, University of Szeged, Szeged, Hungary

Conference closing remarks

12.40-13.30

**Lunch with TwINSol-CECs networking session: Future Project Endeavors**

Poster presentations

- P1** PHENOL REMOVAL FROM WATER USING FIR BIOWASTE-DERIVED PYROCHAR,  
Aleksandra Adamović, Mirjana Petronijević, Saša Savić, Sanja Panić, Nataša Đurišić-Mladenović
- P2** SUSTAINABLE PHYTOREMEDIATION AND BIOFUEL PRODUCTION USING BRASSICA NAPUS ON MULTI-CONTAMINATED SEDIMENTS,  
Ana Marjanović Jeromela, Željko Milovac, Snežana Maletić, Nadežda Stojanov, Nina Đukanović, Stanko Milić, Srđan Rončević, Jelena Beljin, Marijana Kragulj Isakovski, Tijana Zeremski
- P3** EVALUATION OF NANOFILTRATION MEMBRANE MATERIAL IMPACT ON THE REMOVAL OF PHARMACEUTICALLY ACTIVE COMPOUNDS,  
Jelena Šurlan, Nikola Maravić, Zita Šereš, Nataša Đurišić-Mladenović, Igor Antić, Jelena Živančev, Claudia Galinha, Carla Brazinha, Joao Crespo
- P4** METHYLENE BLUE REMOVAL FROM AQUEOUS SOLUTION USING HYDROCHARS DERIVED FROM PEACH AND APRICOT POMACE,  
Danijela Stefanović, Marija Miladinović, Marija Tasić, Milan Kostić, Biljana Đorđević, Olivera Stamenković
- P5** SOLVENT-ASSISTED METHANOLYSIS OF WASTE POLYETHYLENE TEREPHTHALATE,  
Anita Jović, Milan Kostić, Farzam Fotovat, Marija Miladinović, Biljana Đorđević, Olivera Stamenković
- P6** KINETICS OF QUICKLIME-CATALYZED METHANOLYSIS OF HEMP SEED OIL,  
Milan Kostić, Biljana Đorđević, Marija Miladinović, Olivera Stamenković
- P7** DEVELOPMENT OF RENEWABLE POLYURETHANE BIOCOMPOSITES FOR WASTEWATER TREATMENT,  
Milan Nikolić, Slobodanka Stanojević-Nikolić, Vladimir B. Pavlović
- P8** PINWOOD-BASED B-DOPED PYROCHAR WITH ENHANCED SURFACE AFFINITY FOR CATALYTIC DEGRADATION OF CONTAMINANTS OF EMERGING CONCERN,  
Sanja Panić, Nebojša Vasiljević, Mirjana Petronijević, Jelena Živančev, Igor Antić, Nataša Đurišić-Mladenović
- P9** UTILIZATION OF POULTRY WASTE AS A NATURAL BIOSORBENT FOR Cu<sup>2+</sup> REMOVAL,  
Sanja Petrović, Saša Savić, Bratislav Todorović, Staniša Stojiljković
- P10** BIOCATALYTIC PHENOL DEGRADATION USING PEROXIDASE EXTRACTED FROM CABBAGE LEAF RESIDUES,  
Saša Savić, Sanja Petrović, Jelena Mitrović, Mirjana Petronijević, Marcela Barbinta-Patrascu
- P11** REMOVAL OF PHENOL FROM WATER USING ACTIVATED CARBON OBTAINED FROM *S. cerevisiae* BIOMASS,  
Slobodanka Stanojević-Nikolić, Milan Nikolić, Marina Šćiban, Vladimir Srdić, Vladimir Pavlović
- P12** DEVELOPMENT OF A LOW-COST ZEOLITE COMPOSITE FILTER FOR ARSENIC REMOVAL FROM WATER,  
Vesna Vasić, Ivan Stijepović, Dragana Lukić, Marija Milanović
- P13** AGOSERV PROJECT – A UNIQUE PLATFORM FOR SUPPORTING THE DEVELOPMENT OF SUSTAINABLE FOOD SYSTEMS AND FOSTERING AGRO-ECOLOGICAL TRANSITION,  
Ankica Kondić-Špika, Dragana Trkulja, Svetlana Glogovac, Igor Vukelić, Dragana Miladinović, Ana Marjanović Jeromela
- P14** SUSTAINABLE DAIRY INNOVATION THROUGH THE VALORIZATION OF SAGE (SALVIA OFFICINALIS) BY-PRODUCTS: TOWARD FUNCTIONAL FOODS,  
Dajana Vukić, Mirela Ilić, Maja Bjekić, Katarina Kanurić, Branimir Pavlić, Jovana Degenek, Vladimir Vukić
- P15** ZnCrAl LDH BASED MIXED OXIDE AS PHOTOCATALYST FOR WASTEWATER REMEDIATION,  
Đurđica Karanović, Milica Hadnadjev-Kostic, Tatjana Vulic
- P16** MERCURY EXPOSURE: EVIDENCE FROM A BIOMONITORING STUDY IN WOMEN UNDERGOING IN VITRO FERTILIZATION,  
Maja Milanović, Marko Ilinčić, Jana Pavlović, Nataša Milošević, Artur Bjelica, Nataša Milić
- P17** BIODEGRADABLE PROTEIN-BASED FILMS INCORPORATED WITH RUTIN AND RUTIN/β - CYCLODEXTRIN COMPLEX,

- Mina Bosnić, Željana Radonić, Jelena Ostojić, Jelena Milinković Budinčić, Jadranka Fraj, Lidija Petrović, Sandra Bučko, Jaroslav Katona
- P18** THE INFLUENCE OF KOMBUCHA INOCULUM ON ACIDIFICATION PROCESS, QUALITY OF FRESH CHEESE AND ENVIRONMENTAL SUSTAINABILITY OF PRODUCTION
- Mirela Iličić, Maja Bjekić, Katarina Kanurić, Vladimir Vukić, Dajana Vukić, Jovana Degenek
- P19** INSECT FARMING BYPRODUCTS AS AN ALTERNATIVE SOURCE OF CHITOSAN,  
Željana Radonić, Jelena Milinković Budinčić, Lidija Petrović, Matija Milković, Tea Sedlar, Danka Dragojlović, Jadranka Fraj, Sandra Bučko, Jaroslav Katona, Mina Bosnić, Jelena Ostojić, Ljiljana Spasojević
- P20** BORON-DOPED BIOCHAR AS AN EFFICIENT ADSORBENT FOR THE REMOVAL OF SELECTED CONTAMINANTS OF EMERGING CONCERN FROM WASTEWATER,  
Nebojša M. Vasiljević, Mirjana Petronijević, Sanja Panić, Taciana Guarnieri, João Sério, Geórgia Labuto, Vanessa Pereira, Joao Crespo, Nataša Đurišić-Mladenović
- P21** AFLATOXINS IN SERBIAN MAIZE: THE URGENT NEED FOR INTEGRATED RESPONSES TO CLIMATE CHANGE,  
Jovana J. Kos, Bojana Đ. Radić, Radmila O. Radović
- P22** REMOVAL OF BISPHENOL A FROM WATER: CARBON-BASED ADSORBENTS, MECHANISMS, AND TREATMENT EFFICIENCY,  
Marija Šobić, Mirjana Petronijević, Sanja Panić, Nataša Đurišić-Mladenović
- P23** POTENTIAL OF LIGNIN AS AN ADSORBENT FOR THE REMOVAL AND DETECTION OF HORMONES FROM WATER,  
Dragana V. Lukić, Vesna M. Vasić, Taciana Guarnieri, Geórgia Labuto, Vanessa J. Pereira, João Crespo, Nataša Đurišić-Mladenović
- P24** CROSS-BORDER COOPERATION FOR SUSTAINABLE CANCER RESEARCH: THE DAADRAC PROJECT EXPERIENCE,  
Srđan Bjedov, Sergej Cvijić, Ivana Kovačević, Martina Smolić, Marija Hefer, Ana Petrović, Robert Smolić, Đorđe Miljković, Goran Stegnjai
- P25** ANTIBACTERIAL ACTIVITY OF VISIBLE LIGHT DRIVEN PHOTOCATALYTIC CERAMIC BASED NANO-COMPOSITES  
Bojan Miljević, Vesna Miljić, Ivana Danilov, Jovana Grahovac, Siniša Markov, Snežana Vučetić

## Annex II

### Selected photos took during the Workshop



*The welcome speech of Dr. Jelena Živančev and Prof. Nataša Đurišić-Mladenović*

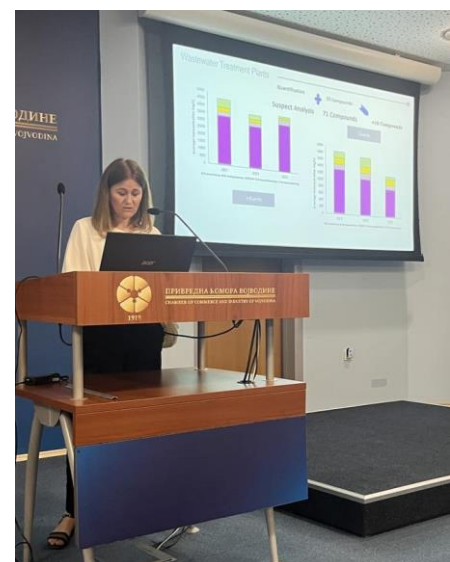


*Keynote lecturer Prof. Hans Peter Arp*





Plenary lecturers (from top to bottom): Prof. Laszlo Kredics, Dr. Marinella Farre, Dr. Claudia Galinha



*Invited lectures (from top to bottom): Dr. Marta Llorca, Prof. Natalija Velić, Prof. Dimitra Lambropoulou,*

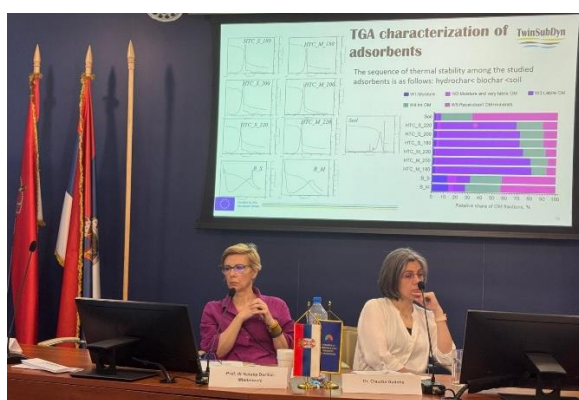


*Invited lectures (from left to right): Prof. Vladimir Beškoski, Prof. Snežana Maletić*

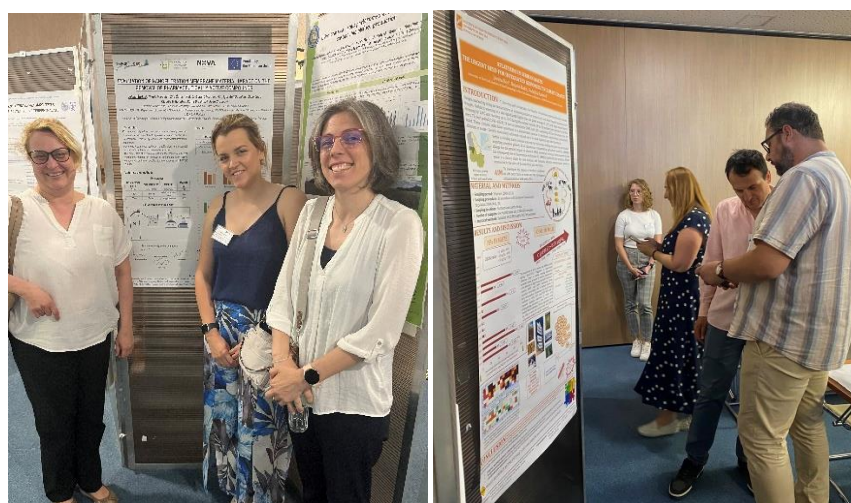
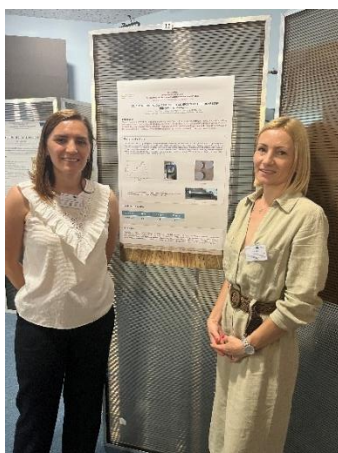


*Details from the oral sessions of the TwINSol-CECs International Conference*





*Details from the oral sessions of the TwINSol-CECs International Conference*

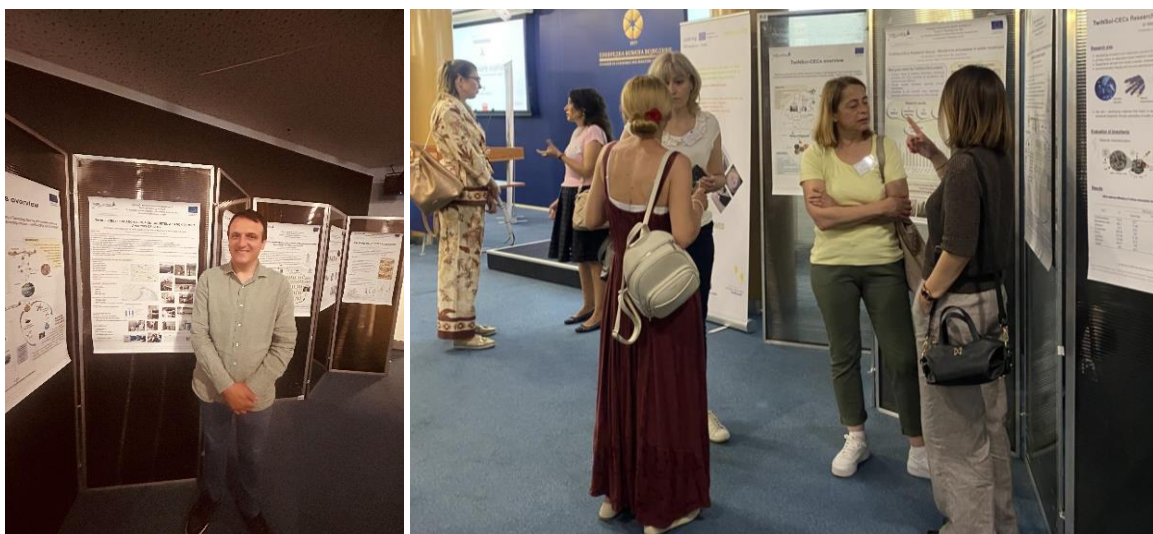


*Details from the poster session of the TwiNSol-CECs International Conference*



*Breaks during the TwiNSol-CECs International Conference*





*In front of the posters presenting the TwiNSol-CECs capacities as a part of the 3<sup>rd</sup> TwiNSol-CECs Workshop*

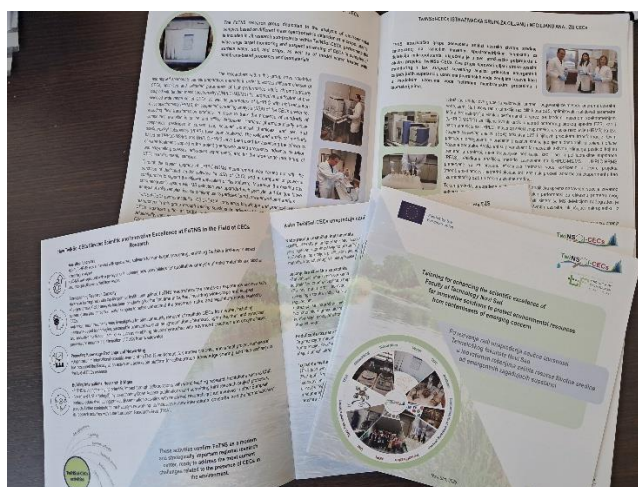


*Official dinner with the invited lecturers*



*Details from breakout session “Unlocking Opportunities: Leveraging Horizon Europe Twinning for Career Growth”, held on June 6, 2025, during the morning session of the fifth day of TwinSubDyn Summer School on Sustainable organic amendment applications from a soil and ground water management perspective - learning, training, and knowledge exchange activity: hosts of the session were coordinators of 5 twinning projects (the upper photo, from left to right): Prof. Vladimir Beškoski (PFASStwin), Prod. Dimitra Labropoulou (SPECTRA), Prof. Nataša Đurišić-Mladenović (TwINSol-CECs), Prof. Đurđa Kerkez (SmartWaterTwin), and Prof. Snežana Maletić (TwinSubDyn)*





*The project brochure prepared for the 3<sup>rd</sup> TwINSol-CECs Workshop and presentation of the TwINSol-CECs activities, achievements, and capacities*



*The prepared registration desk with name tags and registration packages*

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