

**13<sup>th</sup> ICEEE Online Conference**  
**International Council of Environmental Engineering Education**  
**Óbuda University, Budapest, November 17–18th 2022**  
<http://www.iceee.hu/>

The ICEEE Conference brings together scientific researchers from all over the world to discuss pressing challenges related to current and upcoming environmental issues in biotechnology, food security, rural development, as well as environmental problems in biosphere. International cooperation and collaboration among research institutes and universities are some of the main objectives of the conference, and the online venue increases the chances of participants from abroad to join and discuss their research work. The Conference was organized by the ICEEE team, under the supervision of Prof. Dr. Hosam Bayoumi Hamuda at Óbuda University. The sessions had the participation of researchers from Algeria, Albania, Czech Republic Hungary, Egypt, Finland, India, Iraq, Libya, Morocco, Philippines, Poland, Slovakia, Ukraine and United Arab Emirates.

Oral presentations and posters were discussed in 4 simultaneous technical sessions:

**Session 1:** Microbiology, soil biology, soil quality and plant

**Session 2:** Water and water treatment

**Session 3:** Environmental investigations and monitoring

**Session 4:** Air quality, energy and renewable energy

Several areas of interest related to environmental issues, particularly in regards to land use management and protection were discussed in the sessions. Special attention was given to inorganic pollutants and the role of microbiology in dealing with current and potential environmental threats. Remarkable presentations related to the treatment of chemical pollutants in water, soil and air in Algeria, India, Pakistan, and Hungary were held. Likewise, the changes in landscape related to wildlife, such as mole and wild boar were also presented. The online venue of the conference constitutes a favourable platform for extensive participation, and promotes the mission of the ICEEE related to the promotion of spaces on which the collaboration between research groups and institutions is enhanced.

**INDEX** (authors of our institute are marked with **bold**)

### Technical session 1(A): Microbiology, soil biology, soil quality and plant

Bhanu Singh Panwar, S.K. Varshney, Hosam E.A.F. Bayoumi Hamuda, Borbála Biró: Protect soil for survival of mankind.

#### Oral

Kamelia Benotmane Hesni, Mehdi Boukheroufa, Imene Kahli, Rached Hadiby, Feriel Sakraoui: Impact of wild boar (*sus scrofa*) rooting on the physico- chemical properties of soil in the Edough forest (Northeast, Algeria).

Shraddha Joshi, Jyoti Upadhyay, Souradeep Roy, Aashish Mathur: Smart nano-sensors for futuristic agriculture leading towards environment sustainability & nutrition security.

Emőke Imre, Miklós Juhász, Ágnes Bálint: Comparing saline and quick clays.

#### Poster

**Ádám Fehér, Natalia Pitta-Osses, Krisztián Katona, Csaba Centeri:** Comparison of wild boar effects on soil thickness in forests.

Máté Horváth, Hosam E.A.F. Bayoumi Hamuda: Determination the impacts of municipal sewage sludge treatments used for growing common bean and some essential plant nutrient contents in slight acidic soil.

Albert Ondrik, Hosam E.A.F. Bayoumi Hamuda: Comparative studies on soil biological assessment: pesticide sensitivity of microorganisms measured under laboratory conditions.

Mikhailo Slivka, Olexander Moyzesh, Hanna Grygorka, Nataliya Korol, Maksym Fizer, Ruslan Mariychuk: Sustainable reagents for production of fused heterocycles via electrophilic heterocyclization.

Mikhailo Slivka, Olexander Moyzesh, Hanna Grygorka, Nataliya Korol, Maksym Fizer, Ruslan Mariychuk: COMFA study as an efficient approach for the design of biologically active bis-1,2,4-triazoles.

Asmaa Lotfi Alallaf, Metwally Kottb, Ahmed K. El-Sayed, Hesham Mohamed Shafik: Antifungal activity of volatiles emitted from living cultures of *Chlorella vulgaris*, *Desertifilum tharense*, and *Navicula arenaria*.

### Technical session 1 (B): Microbiology, soil biology, soil quality and plant

Lyudmyla Symochko: Concept «one health»: sustainability and biosecurity in ecosystems.

Sándor Kukovics, Ferenc Kukovics, Zoltán Naár: Meat or meat-to-be-plant-based vs meat-base protein.

#### Oral

P. Senthilvalavan, M.V. Sriramachandrasekharan, R. Manivannan, C. Ravikumar: Restoration of problem soils using biochar: a complete natural throughput for sustainable land and crop productivity.

Lamia Boulaouidat, Chaouki Benabbas: Recent and current tectonics in the tell Nord Constantinois: impacts on the stability of the land.

#### Poster

**Viktor Grónás, Csaba Centeri, Márk Pálfi:** Soil aspects of a biodiversity management plan for a solar park.

Fatima Ellamti, Zakaria Mennane, Noureddine Elmtili: Hygienic and physicochemical quality and research of antibiotic residues in milk marketed in Tetouan, Morocco.

Mostafa Ahmed, Diaa Attia, Nadia Mohamed, Ebtessam Abdelmoneem, Mohamed Abdel-Shakur, Kincső Decsi, Zoltán Tóth: Antioxidant activity of *Azadirachta indica* leaf successive extracts and the susceptibility of different pathogenic bacteria and mycotoxigenic fungi to its green-chemically synthesized silver nanoparticles and various extracts.

Yousra Belhadj, Zakaria Mennane, Noureddine Elmtili: Microbiological characterization of different of fresh and processed fruit products marketed in the markets of the province of Tetouan.

Dominika Szűcs, Hosam E.A.F. Bayoumi Hamuda: The effect of urea and urease enzyme inhibitor on the functional diversity of the soil microbial community.

### Technical session 1 (C): Microbiology, soil biology, soil quality and plant

Hosam E.A.F. Bayoumi Hamuda, Lyudmyla Symochko: Soil microbiomes and protection of soil quality.

#### Oral

Hassni Belaidi, Saida Kitouni, Smaine Chellat: Prospectives, challenges and condition for the use of feldspar content in igneous rocks as source of potassium (K) using in agriculture.

Bhanu Singh Panwar, Olha A. Khliestova, Katarzyna Ewa Buczkowska, Baturalp Yalcinkaya, Milan Bousa: Preventive application of untreated city sewage/sewer water for irrigation in cereal crops avoiding heavy metals pollution in soil-plant ecosystem.

Adebayo-Adewunmi, Raimot Adejumo: Ornamental plants: economic importance and common types found in Nigeria.

#### Poster

**Csaba Centeri**, Viktória Vona, Márton Vona, **Zsolt Biró**: Effects of moles on soil properties on grasslands.

**Csaba Centeri**, Viktória Vona, Márton Vona, Eszter Tóth, **Zsolt Biró**, **Alfréd Szilágyi**: Deviation of soil nutrient content on a permaculture farm.

Monsif Elmadany, Fatima Elaamri, Mustapha Hassoun, Nouredine Elmetili: Total carbohydrate content extraction from *Rugulopteryx okamurae* seaweed in the Moroccan coast: optimization using response surface methodology.

Laila Farouk, Zakaria Mennane, Amale Moujahid, Nouredine Elmtili: Phenotypic profile of enterobacteriaceae isolated at the provincial hospital of Tetouan.

Sanaa Tahiri, F. Elaamri, H. Loulad, N. Elmtili: Effect of different culture media on the cell growth of *Tetraselmis suecica*.

**Malihe Masoudi**, **Csaba Centeri**, Gergely Jakab, Viktória Vona, Márton Vona: Assessment of soil properties under different tillage operations.

### Session 2 (A): Water and water treatment

Kshitij Naikade; Sujata Arya: Water in futures market: smart capitalism or toxic disdain for human rights?

#### Oral

Csenge Nagy-Mezei, Anikó Bezsenyi, Imre Gyarmati, Magdolna Makó, Levente Kardos: The role, the performance and the operational experiences of the nitrogen removal fixed-film biological stage operating at the South-Pest wastewater treatment plant.

Fouzia Hizir, A. Krika, F. Kessasra: Use of organic pollution indices in the evaluation of the physico-chemical quality of the surface waters of Wadi Kebir-Rhumel (North-east Algeria).

Rima Kifouche, F. Bouaicha, O. Bouteraa: Environmental effects of thermal water in the region of Guelma, Algeria.

Amal Foughalia, F. Kessasra, L. Aliliche; S. Guerdouh, D. Benabbes: Metallic trace element contamination in surface water and soil around two active and old abandoned quarries. Case study in Chekfa-Jijel and Akbou, north east of Algeria: comparative study.

P. Senthilvalavan, A. Mathesh, K. Arivazhagan, M.V. Sriramachandrasekharan, R. Manivannan, S. Natarajan, C. Ravikumar: Eutrophic water quality assessment and removal of phosphorus using nano biochar.

Fouzia Hizir, A. Krika, F. Kessasra: Level of contamination by the trace metal elements of wadi Kebir-Rhumel (north-east Algeria).

Boualem Bouselsal, Smaine Chellat: Hydrogeological study of the aquifer system of northern Sahara (Sass): case of the region of El-Oued (south-east Algeria).

Ágnes Bálint, Tibor Demény, Xuechu Wang, Csaba Mészáros: Heavy metal concentrations in soil, sludge, water and plant systems along the left bank of the Danube between river kilometres 1653 and 1655.

**Poster**

Olena Mitryasova, Ruslan Mariychuk, Alla Shybanova, Elvira Dzhumelia: Prognosis models of nitrates and orthophosphates content in surface waters.

Attila Fűrész, Gabriella Fintha, Szilárd Szentés, Zsombor Wagenhoffer, Márta Bajnok, Ferenc Szalai, Károly Penksza: Coenological comparison and grassland management analysis of domestic water buffalo pastures at Szurdokpüspöki.

Roquia Rizk, Tatjana Juzsakova, Hesham M. Shafik, Ákos Rédey: Monitoring of the heavy metal content of fish samples of lake Balaton, Hungary.

**Session 3 (A): Environmental investigation and monitoring session**

Mythili Madhusudhan: Ecosystems and landscape for the future generations.

Lydia Sobotova, Tibor Dzuro, Miroslav Badida: Water jet and its environmental problems.

**Oral**

Haimei Chen, Levente Kardos, Magdolna Sütöriné Diószegi, Veronika Szabó: Urban woody plant's benefits in heavy metal pollution monitoring and reduction.

Rudolf Szabó, Lóránt Szabó: Composites materials, processes, properties and applications.

Haya Altaieb, Soufyane Ahmad Hafed, Zoltán Rajnai: Comparison between various MPPT techniques (fuzzy logic, P&O, hybrid system (fuzzy logic, P&O)).

Lara Rúbia Borges Silva, Levente Kardos: Recycling of organic waste: an overview of pálinka distillery mash composting.

Saad K. El Ebaidi, Ahmed M. Muftah, Mohammed H. Al Riaydh: Evaluations of the Eocene apollonia formation in Karsah region, Cyrenaica, Libya, for cement manufacture.

**Poster**

Károly Penksza, Norbert Péter, Attila Fűrész, Eszter Saláta-Falusi, Zoltán Bajor: conservation management and restoration open sandy grassland the Homoktövis conservation area in Budapest.

**Session 3 (B): Environmental investigations and monitoring**

Csaba Lentner, Sándor J. Zsarnócza: Financial and economic positions of Portugal at the turn of 2020s.

Csaba Mészáros, István Róbert Nikolényi, Ágnes Bálint: New symmetry methods for quantum-mechanical modelling of promising photovoltaic materials of infinite chain-type and layer-type atomic systems title.

**Oral**

Deepa Joshi, Thipendra P. Singh: Novel use of a deep convolution architecture pre-trained on surface crack dataset to localize and segment wrist bone fractures.

Mohamed Sabri Bensaad, Saliha Dassamiour, Leila Hambaba, Mohamed Amine Kahoul: Evaluation of the analgesic capacity of the n-butanolic extract of centaurea tougourensis boiss & reut.

Saliha Dassamiour, Mohamed Sabri Bensaad: Test of biological activities of syrups elaborated from waste dates.

Zoubir Belhimer, Azzedine Bouzenoune, Abdelhakim Bouchair: Iron mineralizations of Babors region (northeastern Algeria).

Osamah J. Al-Sareji, Mónika Meiczinger, Raed A. Al-Juboori, Viola Somogyi, Miklós Jakab: Enzyme immobilization on date stones for removing pollutants.

**Poster**

Károly Penksza, Zsuzsanna Sutyinszki, Attila Fűrész, **Dénes Saláta**, Szilárd Szentes: Verges as fragments of the westernmost occurrences of forest grassland in the Carpathian basin and their festuca species.

**Session 3 (C): Environmental investigations and monitoring**

Ruslan Mariychuk: Recent advances in the green synthesis of biocompatible nanoparticles.

Hosam E.A.F. Bayoumi Hamuda: Protection the planet: global ecosystem problems and climatic changes.

**Oral**

**Ákos Malatinszky, Csilla Ficsor**: Horse-powered logging for the protection of Hungarian forests.

Virág Némethy: 7th international CEEPUS winter school design week 2022.

Oumeima Benmebarek, Azzedine Bouzenoune: Polymetallic mineralization (Fe, Cu, Pb, Zn, Ba) of the tellian domain (Jijel province, NE Algeria): microscopic and mineralogical characterization.

Mark Gabriel Wagan Aguilar, Jayson Nual Olayta: Environmental attitude versus behaviour of tourism management students in selected colleges and universities in region IV-A, Philippines: a basis for educational planning and development.

Ákos Borbély: Colorimetric investigation of fall foliage.

**Poster**

Tareq Irhayyima, Mohamed Ali Rawash: Climate change and agriculture sector in Egypt: effects and adaptation.

**Session 3 (D): Environmental investigations and monitoring session**

Tatjana Juzsakova, Ali Dawood Salman, Béla Varga, Gvendolin Kulcsár, János Lauer, Tamás Pap: Rare Earth Metals separation from bauxite waste by ion exchange and solvent extraction techniques.

**Oral**

Ali Dawood Salman, Tatjana Juzsakova, Moayyed G. Jalhoom, Sebestyen Viktor, Endre Domokos: Synthesis and surface modification of magnetic Fe<sub>3</sub>O<sub>4</sub>@SiO<sub>2</sub>-EDTA nanoparticles and its application in uptake of nickel(ii) ions from aqueous media.

**Natalia Pitta-Osses, Csaba Centeri, Krisztián Katona**: Population control of high impact mammals: comparison of methods for wild hippos in Colombia and wild boar in Europe (Figure 1.).

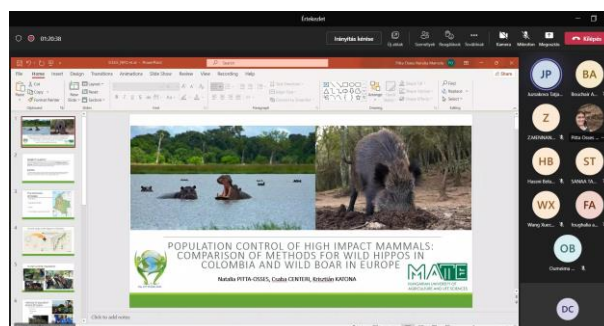


Figure 1. Screenshot of the zoom window during the presentation of Natalia Pitta-Osses

1. ábra. Képernyőfotó a Zoom ablakról Natalia Pitta-Osses előadása alatt

Xuechu Wang: The corporate aspects of climate change action.

Zakaria Mennane, Jamal Abrini, Noureddine Elmtili: Physico-chemical and microbiological characteristics of traditional and industrial figs taken from the markets of Tetouan in Morocco.

Abdelhakim Bouchair, Azzedine Bouzenoune, Yasser Mahamdioua, Yasser Kemel, Zoubir Belhimer: Distribution and petrography of eocene ooidal ironstones from Kef in Nsour deposit (Tebessa, north-eastern Algeria).

Malak Shatnawi, Haya Altaieb, Zoltán Rajnai: Natural disasters impacts; risk assessment and sustainability solution.

#### **Session 4: air quality, energy and renewable energy**

Edmond Hoxha: "Green Energy" as challenge and opportunity in Albania.

##### **Oral**

Bushra Atfeh, Róbert Mészáros: Application of low-cost sensors for indoor air quality monitoring in Budapest, Hungary

Sara Alkhalidi, Katalin A. Főglein, Krisztina Demény: A more sustainable transport: review of electric cars.

Lily Tanui, Emőke Imre: Solar and wind power installation on Pusztazámor landfill site.

Csaba Ágoston: Local enrichment of air pollutants in a practical example.

##### **Poster**

Doris Stojilkovic, Hosam E.A.F. Bayoumi Hamuda: Air quality and distribution of lichens as bio-monitors in some Serbian and Hungarian territories.

Emőke Imre, Paulo Combacau, Khalil Ben Khaled: Wind energy measurement in a landfill site.

Emőke Imre, Parvesh Taneja: Development of a data acquisition system, DAS, for measuring solar irradiance using pyranometer in the Pusztazamor landfill site.

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