



EUROPEAN UNION
European Structural and Investment Funds
Operational Programme Research,
Development and Education



V4 Biochar Platform

Biochar not only for agriculture and industry

<http://v4biochar.czu.cz>

1st V4 Biochar Conference – online

17 September 2021 | 09:00 – 15:00 |

We cordially invite all stakeholders and interesting parties to attend on the **1st V4 Biochar Conference** (online) organized by V4 Biochar Platform on **17 September 2021**.

*The conference will be held online (MS Teams) and its free of charge. **Deadline for registration: 10 September, 2021.***

For more information: <https://v4biochar.czu.cz/cs/r-15066-aktuality/1-st-v-4-biochar-conference-online.html>

Coordinator contact: Lukas Trakal, CZU Prague
v4biochar@gmail.com or <https://v4biochar.czu.cz/en/r-15572-contacts>

Event registration: <https://forms.office.com/r/bAs1877SR1>

Link to the conference: [here](#)

Information on V4Biochar Platform

The V4 Biochar Platform aims to connect all partial researchers of biochar in two basic sections - biochar for agriculture and biochar for industry.

The V4 Biochar Platform offers collaboration of all entities involved in all steps of biochar utilization, from production and characterization to its application and evaluation of efficiency. It also connects domestic experts with the international scene with an emphasis on the Visegrad Four countries and provides information services to its members

Specific objectives of the platform:

- Speed up the journey of Biochar into soil
- Set up a comprehensive approach to address scientific issues in biochar by connecting teams across the V4 countries
- Unification of scientific potential and better competitiveness leading to more valuable outputs of basic and applied research
- Connecting scientific workplaces and other entities through regular seminars
- Connecting researchers with foreign partners by organizing international conferences and workshops
- Involvement in the international platform International Biochar Initiative (IBI)
- Facilitating the preparation of joint European projects in the form of a pre-established consortium within the platform
- Establishment of communication media for public relations
- Creation of a "biochar marketplace" promoting products, ideas and technologies

Through number of thematic workshops and conferences, V4Biochar Platform aims to **bring and share appropriate knowledge** and innovation in the field.

During 1st V4 Biochar Conference organized under V4 Biochar Platform, the **Top International Researchers** will give presentation on different approaches and novelties in the field of biochar.

Speakers



Mr. Edward Someus (HU) is Swedish upcycling engineer, specialized on the high temperature pyrolysis technology RTD/industrial engineering and pyrolysis product formulations, driven towards market competitive industrial applications. The core activity is the industrialisation and commercialisation of Refined Carbon (biochar/biophosphate) and Graphene products. Since 2002 coordinator and key technology designer for several large scale EU biochar applied research projects, and since 2010 EU Commission policy support consultant for biochar and phosphorus recovery cases related to the EU 2019/1009 Fertilising Products Regulation.

https://nutriman.net/farmer-platform/product/id_192 and https://nutriman.net/farmer-platform/product/id_1571



Dr. Ajit K. Sarmah (NZ) is an Associate Professor in the Civil & Environmental Engineering Department at the University of Auckland, New Zealand. He has a multidisciplinary background with training in both science and engineering disciplines and obtained his PhD (Soil and Water) from the University of Adelaide, Australia. He holds M.Eng in Soil & Water from the Asian Institute of Technology, Bangkok, Thailand and MS in Soil Physics from the University of Queensland, Australia. He obtained BSc.Ag.Eng degree with major in Soil and Water from the University of Allahabad, India. He worked as a Senior Research Scientist at Landcare Research, a Crown Research Institute in Hamilton, New Zealand for nearly 10 years. Earlier he worked in the School of Civil Engineering and School of Agronomy of Purdue University, West Lafayette, Indiana, USA as a Visiting Scientist, as a Research Officer

in University of Western Australia, and as a Research Associate at the Asian Institute of Technology, Bangkok, Thailand. His current research focus is on biomass valorisation and biochar application in diverse sectors (including construction & building, geotechnical, wood plastic biochar composite), fate modelling & validation and microplastics in the agro-ecosystems.



Prof. Daniel C.W. Tsang (HK) emphasizes a strong link to societal needs and real-life environmental challenges. We strive to advance our fundamental knowledge and develop carbon-efficient technologies to actualize Sustainable Development Goals (SDGs). We perform interdisciplinary and translational research in natural and engineered systems: (i) value-added utilization of food waste, wood waste, agro-waste, sludge, and CO₂ (ii) environmental assessment and green remediation of contaminated soil/sediment and (iii) stormwater harvesting and industrial wastewater treatment for resilient water cycles. <https://www.dan-tsang.com/>



Prof. Dinesh Mohan (IND) has more than 21 years of diverse research experience aimed at the challenging problems in the area of Energy and Environment. He conducts research on water (ground and surface) and wastewater monitoring and development of sustainable treatment technologies, use of thermochemical platform for the production of biofuels (biooil) from lignocellulosic biomass. Prof. Mohan is also involved in biochar development, characterization and utilization in water filtration, soil immobilization and fertility, carbon sequestration and climate change mitigation. Laboratory and field studies to evaluate the effects of biochar on crop yield, nutrient retention, nitrogen cycles, nitrous oxide and methane dynamics, water holding capacity and carbon cycling are in progress/completed. Prof. Mohan has developed a variety of activated carbons/magnetic carbons/nanosorbents/biochars for the remediation of organic (phenols, dyes, pharmaceuticals, pesticides etc.) and inorganic (heavy metal ions, fluoride, nitrate etc.) pollutants from water and wastewater.



Prof. Patryk Oleszczuk (POL) is a Professor of Environmental Chemistry and Head of Environmental Chemistry Department at Maria Curie-Skłodowska University, Poland. His research interest includes: (1) ecotoxicology and environmental chemistry, (2) fate of organic and inorganic contaminants in environmental (soil, water, sediments) and anthropogenic samples (sewage sludges, composts, food); (3) nanoparticles in the environment (fate, determination, sorption of organic contaminants, toxicity); (4) waste (mainly sewage sludge and compost) management and utilization; (5) biochar properties and applications. Dr. Oleszczuk has more than eighteen years of research experience on contaminants such as polycyclic aromatic hydrocarbons, nanomaterials and heavy metals in natural and engineered environment. He has published more than one hundred peer-reviewed high impact journal papers on the above topics and is a frequent invited speaker at many international conferences and universities.



Prof. Meththika Vithanage (SL) is a full professor at the Office of the Dean, Faculty of Applied Sciences, University of Sri Jayewardenepura, Sri Lanka. She is the founding Director of the Ecosphere Resilience Research Centre, University of Sri Jayewardenepura. She is a Young Affiliate of the Third World Academy of Sciences and she became the Chairperson of the Young Scientists Forum in 2017. She was awarded as the Best Young Scientist, 2018 by the Young Scientist Forum of the National Science and Technology Commission, Sri Lanka and in 2016 she became the Young Scientist in Chemistry by the National Science Foundation of Sri Lanka. She was selected as one of the Early Career Women Scientists by the Organization for Women Scientists in the Developing Countries, Italy. She served as the Chairperson of the Section for Engineering, Architecture and Surveying of the Sri Lanka Association for the Advancement of Science, Sri Lanka in 2018. She has received Presidential Awards for Scientific Publications for 10 years. Prof. Vithanage was awarded as the Best Performing Scientist for few years at the National Institute of Fundamental Studies.



Dr. Domenico Morabito (F) has focused on three main areas: (i) Study of biological mechanisms involved in water use efficiency in poplar trees (ii) Study of the transcriptomic and proteomic response of poplar to various abiotic stresses (drought, heat or heavy metal pollution) (iii) Implementation of restoration techniques through phytomanagement of heavily anthropized environments. The final perspective of this last point is to better understand the remediation capacities of woody species (poplar and salix), in order to vegetate areas that are unsuitable for plant development. In details, he develops alternative approaches in aided phytostabilisation using biochar as amendment. He is particularly interested in species that do not translocate pollutants to aerial parts. The final goal is to valorize these abandoned areas which are sources of pollution into biomass-producing surfaces compatible with energy production.



Dr. Ondrej Masek (UK) works at the UK Biochar Research Centre, which is a part of the School of Geosciences at the University of Edinburgh. His role is to lead the research on biochar production technologies and associated processes. Beside this, he also teaches the introduction to CO₂ capture and transport technologies on the Carbon Capture and Sequestration MSc course. Research interests are technologies for biochar production and utilisation of by-products (oil and gas) for bio-fuels and bio-energy generation. Thermochemical conversion of carbonaceous materials (gasification, pyrolysis, combustion, etc.). CO₂ capture and transport technologies (post-combustion, pre-combustion, oxy-combustion and advanced capture technologies).



Prof. Eakalak Khan (USA) is a Professor in Civil and Environmental Engineering and Construction Department and the Director of Water Resources Research Program, University of Nevada, Las Vegas. From 2002 to 2017, he was a Professor in Civil and Environmental Engineering Department, North Dakota State University (NDSU). He also served as the Chair of Civil Engineering Department, NDSU from 2010 to 2013. Prior to NDSU, he was an Assistant Professor in the Department of Civil Engineering, Polytechnic University, New York from 1999 to 2002. He received his Bachelor of Engineering in Environmental Engineering from Chiang Mai University, Thailand in 1990, M.S. in Agricultural Engineering from University of Hawaii in 1993, and Ph.D. in Civil Engineering from University of California, Los Angeles (UCLA) in 1997. In 1998, he was a Postdoctoral Research Associate at the Institute of Environment, UCLA. Eakalak has published more than 120 refereed journal articles. He was awarded a CAREER grant from NSF in 2005. His honors include the NDSU Odney Award for Excellence in Teaching in 2008, Researcher of the Year, College of Engineering, NDSU, 2005, and Water B. Booth Endowed Distinguished Professorship, NDSU, 2017.

1st V4 Biochar Conference (17 September 2021, 09:00 – 15:00)

	WELCOME TALK
09:00 – 09:05	Dr. Lukas Trakal (CZU Prague, Director of V4 Biochar Platform, Czech Republic)
09:05 – 9:35	The new EU regulations for CMC14 pyrolysis material biochar cases and expected market impacts beyond 2022. Mr. Edward Someus (3R-BioPhosphate Ltd, Hungary)
9:35 – 10:05	Biochar admixture cement mortar fines for metal removal from water: a technoeconomic feasibility study Dr. Ajit K. Sarmah (University of Auckland, New Zealand)
10:05 – 10:35	Biochar integration in bioswale and bioretention basin Prof. Daniel C.W. Tsang (Hong Kong Polytechnic University, Hong Kong)
10:35 – 10:40	Break
10:40 – 11:10	Biochar production and application in water filtration Prof. Dinesh Mohan (Jawaharlal Nehru University, India)
11:10 – 11:40	Compost residue derived biochar as a material for integrated landfill leachate treatment system Prof. Meththika Vithanage (University of Sri Jayewardenepura, Sri Lanka)
11:40 – 12:10	(to be added...) Prof. Patryk Oleczuk (University of Maria Skłodowska-Curie in Lublin, Poland)
12:10 – 13:20	LUNCH BREAK
13:20 – 13:50	Mobility of metal(loids) from soil toward soil pore water, plants and insects from mining soils amended with biochar Dr. Domenico Morabito (Université d'Orleans, France)
13:50 – 14:20	Sequential uses of biochar, with focus on contaminants and water treatment Dr. Ondrej Masek (UK Biochar Research Centre, UK)
14:20 – 14:50	Utilization of biochar for removing emerging contaminants in water and wastewater Prof. Eakalak Kahn (University of Nevada, Las Vegas, USA)
14:50 – 15:00	CLOSING SUMMARY



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Registration to V4 Biochar Platform

Work with us and become a MEMBER of the platform on:

<https://v4biochar.czu.cz/en/r-15571-collaboration>

- 1. Fill the form to approve the memorandum and register your organization***
- 2. Register yourself under your organization***
- 3. Cooperate with the registered members of the platform***



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