



# 2021

PROGRAMME

## INTERNATIONAL SOIL SCIENCE SYMPOSIUM on SOIL SCIENCE & PLANT NUTRITION

(6<sup>th</sup> International Scientific Meeting)

18 – 19 December 2021

Samsun, Turkey

### Editors

Dr.Rıdvan KIZILKAYA

Dr.Coşkun GÜLSER

Dr.Orhan DENGİZ

### Organized by

Federation of Eurasian Soil Science Societies

Erasmus Mundus Joint Master Degree in Soil Science (emiSS) Programme



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# International Soil Science Symposium on “SOIL SCIENCE & PLANT NUTRITION” 18 – 19 December 2021 / Samsun, Turkey

Symposium Programme (18 Dec 2021 / 09:30-13:00)

## WELCOMING & OPENING SPEECH

HOUR	ROOM A	
09:30-10:15	Opening Speech	Garib MAMMADOV, President of FESSS
	Opening Speech	Ayten NAMLI, President of Soil Science Society of Turkey
	Welcoming Speech	Rıdvan KIZILKAYA, Chair of Symposium
	Welcoming Speech	Coşkun GÜLSER, Coordinator of emiSS

HOUR	ROOM A Chair : Taşkın ÖZTAŞ	ROOM B Chair : Orhan DENGİZ
10:30-12:00	<b>Investigation of agricultural use potential of liquid fermented products from biogas plants</b> <i>Ayten NAMLI, Muhittin Onur AKCA, Hanife AKCA</i>	<b>Relationship between soil quality and soil organic carbon</b> <i>Deividas MIKŠTAS, Orhan DENGİZ</i>
	<b>The use of soybean biomass ash and bacterial inoculums as the treatment in acidic soils to improve soil and barley plant quality</b> <i>Aneta BUNTIĆ, Sonja TOŠIĆ JOJEVIĆ, Magdalena KNEŽEVIĆ, Marija MILIĆ, Katarina MIHAJLOVSKI, Nikola KOKOVIĆ, Elmira SALJNIKOV</i>	<b>Removal of biogenic elements by corn plants depending on the influence of experimental factors</b> <i>Lesia KARPUK, Andrii PAVLICHENKO, Vladyslav POLIAKOV</i>
	<b>Assessment of the influence of modern microbiological preparations on the biology activity of chernozem</b> <i>Ekaterina RYBALKINA, Kamil KAZEEV</i>	<b>The impact of slope aspect on soil temperature and water content</b> <i>Nazeir ELNAKER, Tomasz ZALESKI</i>
	<b>Post-fire changes in the enzymatic activity of soils</b> <i>Valeria VILKOVA, Michael NIZHELSKIY, Kamil KAZEEV</i>	<b>How soil property can be altered with the use of different biodegradable geotextiles? A review</b> <i>Ishrat-E-Anwar BRISHTY, Agnieszka JÓZEFOWSKA</i>
	<b>Biosorption of copper (II) from an aqueous solution by Bacillus mycoides cells isolated from anthropogenically contaminated soils under various environmental conditions</b> <i>Vladislav ZINCHENKO, Tatiana BAUER, Svetlana KOZMENKO, Hadeer ELGENDY, Andrey GOROVTSOV, Tatiana MINKINA, Md Mahfuzur RAHMAN, Rıdvan KIZILKAYA, Svetlana SUSHKOVA, Vishnu D. RAJPUT, Coşkun GÜLSER, Andrey BARBASHEV</i>	<b>Soil quality index calculated including the evaluated soil ecological units in central bohemia region in the Czech Republic</b> <i>Markéta MIHÁLIKOVÁ, Tereza VRANOVSKÁ, Mustafa Tolga ESETLILI, Svatopluk MATULA, Yusuf KURUCU, Jaroslava JANKŮ</i>
12:00-13:00	<b>BREAK</b>	



# International Soil Science Symposium on “SOIL SCIENCE & PLANT NUTRITION”

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Symposium Programme (18 Dec 2021 / 13:00-14:45)

HOUR	ROOM A Chair : Svetlana SUSHKOVA	ROOM B Chair : Sezai DELİBACAĞ
13:00-14:30	<b>Effect of soybean planting and vermicompost application on soil physical properties</b> <i>Dorcas OJEADE, Coskun GÜLSER, Elnakar NAZEIR, Elgindy HADEER, Belkis KARAPIÇAK</i>	<b>Functional evaluation of available up to date pedotransfer functions for estimation of saturated hydraulic conductivity of selected localities in the Czech Republic</b> <i>Kamila BÁŤKOVÁ, Svatopluk MATULA, Markéta MIHÁLIKOVÁ, Eva HRŮZOVÁ, Recep Serdar KARA, Cansu ALMAZ</i>
	<b>Different soil management systems and their effects on soil carbon content, aggregate stability and the unsaturated hydraulic conductivity of two different long term experiment fields in Germany</b> <i>M. Resat SUMER, Jutta ZEITZ</i>	<b>Assessment of soil erodibility factor (K-factor) for steppe area (Volgograd region, Russia)</b> <i>Nikita KRIUCHKOV</i>
	<b>The effects of different tillage methods and farmyard manure on some physicochemical properties of soils and yield in Aydın, Turkey</b> <i>M. Resat SUMER, Feride ONCAN SUMER</i>	<b>Influence of slope and management practices on top-soils fertility status of compound farms in Nsukka Campus</b> <i>Benedict Odinaka OKORIE, Charles L.A. ASADU</i>
	<b>The spacio-temporal dynamics of soil moisture and temperature: A review</b> <i>Tatiana Camila ZAMORA-FORERO, Tomasz ZALESKI</i>	<b>Change of composition, mineralization and depth of subsoil water in the experimental area of the Shirvan plain, Azerbaijan</b> <i>Farid Mustafa MUSTAFAYEV</i>
	<b>Applicability of a mathematical approach to evaluate of soil temperature in the plant root zone</b> <i>İmanverdi EKBERLİ, Coşkun GÜLSER</i>	<b>Effects of olive pomace application on some soil properties</b> <i>Safiye ŞAHİN AYAR, Coşkun GÜLSER</i>
14:30-14:45	<b>BREAK</b>	



# International Soil Science Symposium on “SOIL SCIENCE & PLANT NUTRITION”

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Symposium Programme (18 Dec 2021 / 14:45-16:30)

	ROOM A	ROOM B
HOUR	Chair : Tatiana MINKINA	Chair : Lesia KARPUK
14:45-16:15	<b>Soil properties have more significant effects on the community composition of protists than the rhizosphere effect of rice plants in alkaline paddy field soils</b> <i>Rasit ASILOGLU,</i> <i>Keiko SHIROISHI,</i> <i>Kazuki SUZUKI,</i> <i>Oguz Can TURGAY,</i> <i>Naoki HARADA</i>	<b>Coping up metal stress (ZnO NPs) in plants by application of various forms of biochar amendments (A review)</b> <i>María Belén MOYA,</i> <i>Vishnu D. RAJPUT,</i> <i>Svetlana SUSHKOVA</i>
	<b>Microbial predators regulate plant root microbiome</b> <i>Rasit ASILOGLU,</i> <i>Keiko SHIROISHI,</i> <i>O. Solomon SAMUEL,</i> <i>Murat AYGAN,</i> <i>Kazuki SUZUKI,</i> <i>Naoki HARADA</i>	<b>Phytomining of Ni by <i>Alyssum murale</i> on an ultramafic soils</b> <i>Shreya THAPALIYA,</i> <i>Violina ANGELOVA</i>
	<b>Total zinc contents of composted and vermicomposted olive pomace waste with manure</b> <i>Belkıs KARAPIÇAK,</i> <i>Rıdvan KIZILKAYA,</i> <i>Coşkun GÜLSER,</i> <i>Abdurrahman AY</i>	<b>Big data analysis for ecological risks evaluation and pollutants' redistribution research</b> <i>Anton ZHUMBEBY,</i> <i>Tatiana MINKINA,</i> <i>Svetlana SUSHKOVA,</i> <i>Yurii LITVINOV,</i> <i>Anton MEZHENKOV,</i> <i>Muhammad Tukur BAYERO,</i> <i>Coskun GÜLSER</i>
	<b>Composting with microorganisms: to improve available nutrient contents in sustainable soil management</b> <i>Md Mahfuzur RAHMAN,</i> <i>Rıdvan KIZILKAYA,</i> <i>Nabeela MAQBOOL,</i> <i>Coşkun GÜLSER</i>	<b>The effect of good agricultural practices in Hazelnut Orchard on soil properties and yield</b> <i>Erdal OKLU,</i> <i>Rıdvan KIZILKAYA</i>
	<b>The effects of biochar on soil biological properties: A review</b> <i>Nabeela MAQBOOL,</i> <i>Rıdvan KIZILKAYA,</i> <i>Andon ANDONOV,</i> <i>Md Mahfuzur RAHMAN</i>	<b>The selection of rice genotypes (<i>oryza sativa</i> L.) resistant to zinc deficiency in the sand culture media</b> <i>Sümevra KIR,</i> <i>Ayhan HORUZ</i>
16:15-16:30	BREAK	





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	ROOM A	ROOM B
HOUR	Chair : Markéta MIHÁLIKOVÁ	Chair : Orhan DENGİZ
16:30-17:30	<b>Phyto extraction of nickel using nickel hyperaccumulator in serpentine soils of Bulgaria</b> <i>Shreya THAPALIYA,</i> <i>Violina Angelova RIZOVA</i>	<b>The transition of arbuscular mycorrhizal fungal community composition in plant roots, soil spores, and extraradical hyphal fractions during host growth</b> <i>Kazuki SUZUKI,</i> <i>Kohei TAKAHASHI,</i> <i>Rasit ASILOGLU,</i> <i>Naoki HARADA</i>
	<b>The efficiency of application of humic preparation georganics to enhance plant development</b> <i>Guguli DUMBADZE,</i> <i>Lali JGENTI,</i> <i>Malvina TARIELADZE</i>	<b>Molecular characterization of Beet virus Q isolates in sugar beet production areas of Turkey based on coat protein gene</b> <i>Ebru ERKAN,</i> <i>Nazli Dide KUTLUK YILMAZ</i>
	<b>The effect of two iron fertilizers on DTPA extractable micronutrient contents of a calcareous soil</b> <i>Abdurrahman AY,</i> <i>Rıdvan KIZILKAYA,</i> <i>Salih DEMİRKAYA,</i> <i>Coşkun GÜLSER</i>	<b>Biological diagnosis of soils after exposure to smoke from fires</b> <i>Mikhail NIZHELSKIY,</i> <i>Kamil KAZEEV,</i> <i>Valeria VILKOVA,</i> <i>Sergei KOLESNIKOV</i>
	<b>The effect of different types of tillage on the fractional content of mineral phosphates in Calcic Chernozem</b> <i>Ekaterina KUCHMENKO,</i> <i>Olga BIRYUKOVA,</i> <i>Roman KAMENEV,</i> <i>Anna MEDVEDEVA,</i> <i>Saglara MANDZHIEVA,</i> <i>Hazrat AMIN,</i> <i>Orhan DENGİZ</i>	<b>Nitrification processes in the soils of the coal waste dump near the city of Shakhty (Rostov region, Russia)</b> <i>Elizaveta PULIKOVA,</i> <i>Svetlana ANTONENKO,</i> <i>Andrey GOROVTSOV,</i> <i>Dina NEVIDOMSKAYA,</i> <i>Tatiana MINKINA,</i> <i>Maria Belen MOYA,</i> <i>Rıdvan KIZILKAYA</i>
	<b>Relationship between chemical &amp; organic fertilization practices and global warming</b> <i>Songül RAKICIOĞLU,</i> <i>F. Şüheda HEPŞEN TÜRKAY</i>	



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Symposium Programme (19 Dec 2021 / 10:30-13:00)

	<b>ROOM A</b>	<b>ROOM B</b>
<b>HOURL</b>	<b>Chair : Svatopluk MATULA</b>	<b>Chair : Oğuz Can TURDAY</b>
<b>10:30-12:00</b>	<p><b>Impact of soil-applied biochar and foliar application of ZnO NPs on plant growth in PAHs contaminated soils</b>  <i>Hadeer ELGENDY,  Tatiana MINKINA,  Svetlana SUSHKOVA,  Vishnu RAJPUT,  Rıdvan KIZILKAYA,  Andrey BARBASHEV,  Tamara DUDNIKOVA</i></p>	<p><b>Combination of fuzzy-AHP and neutrosophic-set and their applications for the multiple-criteria decision analyses</b>  <i>Nursaç Serda KAYA,  Orhan DENGİZ</i></p>
	<p><b>Overview of heavy metal contamination in Urban soil and Human Health</b>  <i>Swagata CHOWDHURY,  Michał GASIOREK  Orhan DENGİZ</i></p>	<p><b>Digital soil mapping of AWC in arable lands: Comparison of different machine learning models</b>  <i>Fuat KAYA,  Levent BAŞYİĞİT,  Mert DEDEOĞLU,  Ali KESHAVARZI</i></p>
	<p><b>Digital mapping of soil copper contamination: Comparison of gaussian process regression and random forest models</b>  <i>Ali KESHAVARZI,  Güneş ERTUNÇ,  Fuat KAYA</i></p>	<p><b>Artificial intelligence and remote sensing as a tool for sustainable agricultural: A review</b>  <i>Endalkachew Abebe KEBEDE,  Anadon Vassilev ANDONOV,  Bojin BOJINOV,  Orhan DENGİZ</i></p>
	<p><b>Effect of PAHs and heavy metal co-contamination on soil microbial communities and their metagenomics studies</b>  <i>Jawaria JOHAR,  Rıdvan KIZILKAYA,  Svetlana SUSHKOVA,  Tatiana MINKINA</i></p>	<p><b>Detection of different agricultural crops on the same land parcel with soil moisture analysis by using remote sensing in part of central Bohemia Region, Czech Republic</b>  <i>Furkan YILĞAN,  Markéta MIHÁLIKOVÁ,  Jan VOPRAVIL,  Svatopluk MATULA</i></p>
	<p><b>Exploring the potential of metal-organic frameworks (MOFs) decorated biochar for the remediation of heavy metal-contaminated media</b>  <i>Muhammad Tukur BAYERO,  Mahmoud MAZARJI,  Svetlana SUSHKOVA, Tatiana MINKINA,  Saglara MANDZHIEVA, Tatiana BAUER,  Coşkun GÜLSER, Rıdvan KIZILKAYA,  Orhan DENGİZ</i></p>	<p><b>Spatial variability of fertility of Calcic Chernozem during the cultivation of winter wheat using no-till technology</b>  <i>Yaroslav ILCHENKO,  Lev URALEV,  Olga BIRYUKOVA,  Alisa ILCHENKO,  Tatiana MINKINA</i></p>
<b>12:00-13:00</b>	<b>BREAK</b>	



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	ROOM A	ROOM B
HOUR	Chair : Tomasz ZALESKI	Chair : Füsün GÜLSER
13:00-14:30	<p><b>An analysis of the responses of different sub-basins with various soil profile in the central rift valley basin in Ethiopia to the impacts of climate change with their water balances, using the SWAT model</b></p> <p><i>Lemma Adane TRUNEH, Svatopluk MATULA, Kamila BÁTĀKOVÁ</i></p>	<p><b>The pH changes of the soil with the introduced biochar during the adsorption of Cu and Zn</b></p> <p><i>Marina BURACHEVSKAYA, Tatiana MINKINA, Tatiana BAUER, Saglara MANDZHIEVA, Svetlana SUSHKOVA, Coşkun GÜLSER, Jawaria JOHAR, Rıdvan KIZILKAYA, Victoria SEVERINA</i></p>
	<p><b>Greenhouse gas emissions intensity of Kazakhstan croplands</b></p> <p><i>Maira KUSSAINOVA, Maxat TOISHIMANOV, Timur TAMENOV, Yersultan SONGULOV, Moldir KULSHIGASHOVA</i></p>	<p><b>Evaluation of indigenous rock phosphate deposits in Turkey in terms of chicken ration: A review</b></p> <p><i>Nazmi ORUÇ</i></p>
	<p><b>Responses of common bean (Phaseolus Vulgaris L.) to applications of NPSZnB in different combinations in Debub Ari District, Southwestern Ethiopia</b></p> <p><i>Atinafu TUNEBO, Samuel FEYISSA, Abay AYALEW</i></p>	<p><b>The effect of iron enriched acidified and non-acidified biochars on DTPA extractable iron content of a calcareous soil</b></p> <p><i>Salih DEMIRKAYA, Coşkun GÜLSER, Abdurrahman AY</i></p>
	<p><b>Short term dynamics of some soil fertility indices of sandy loam Ultisol amended with varying rates of rice husk biochar</b></p> <p><i>Nancy Ekene EBIDO, Chukwuebuka Edwin AWAOGU, Benedict O. UNAGWU, Ogorchukwu Valerie OZONGWU, Sunday Ewele OBALUM</i></p>	<p><b>Organic fertilizers as a source of microelements and potentially toxic elements</b></p> <p><i>Maja MANOJLOVIĆ, Dragan KOVAČEVIĆ, Ranko ČABILOVSKI, Klara PETKOVIĆ, Mirna ŠTRBAC</i></p>
	<p><b>The role of activated bentonite in the removed of iron toxicity in rice growing in sand culture media</b></p> <p><i>Özlem PALA, Ayhan HORUZ</i></p>	<p><b>Effect of water stress related with soil properties on plant growth</b></p> <p><i>Züleyha ZORLU, Coşkun GÜLSER</i></p>
14:30-14:45	<b>BREAK</b>	



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	ROOM A	ROOM B
<b>HOURLY</b>	<b>Chair : Agnieszka JÓZEFOWSKA</b>	<b>Chair : Orhan DENGİZ</b>
<b>14:45-16:15</b>	<p><b>Variability of crust formation under various land use and land cover</b> <i>Fikret SAYGIN,</i> <i>Orhan DENGİZ,</i> <i>Serkan İÇ</i></p> <p><b>Evaluating Splintex 2.0 for estimating the soil hydraulic properties in the western Mediterranean Region</b> <i>Pelin ALABOZ,</i> <i>Orhan DENGİZ,</i> <i>Alessandra Calegari da SILVA ,</i> <i>Robson André ARMINDO</i></p> <p><b>Effect of organic manures application on soil physicochemical properties of coarse-textured ultisol and okra productivity in Nsukka Southeastern Nigeria</b> <i>Vincent AZUKA,</i> <i>Matthew IDU</i></p> <p><b>Compost and commercial biochar applications may have contrary influences on the low-cost FDR moisture sensor measurements of top-soils: A laboratory experiment</b> <i>Recep Serdar KARA,</i> <i>Donatus Dzedzorm DZISSAH,</i> <i>Markéta MIHÁLIKOVÁ,</i> <i>Cansu ALMAZ,</i> <i>Svatopluk MATULA</i></p> <p><b>Effect of organic waste and polymer applications on some mechanical parameters of soils</b> <i>Zerrin ÇİVELEK,</i> <i>Nutullah ÖZDEMİR</i></p>	<p><b>The effects of mixing geothermal fluids with irrigation water on strawberry plant</b> <i>Müge İNCEOĞLU AR,</i> <i>Saime SEFEROĞLU</i></p> <p><b>Monitoring of drought severity in Konya closed basin using Standardized Precipitation index and Modis satellite images</b> <i>Aykut CAGLAR,</i> <i>Orhan DENGİZ,</i> <i>Ismail CINKAYA</i></p> <p><b>Soil management assessment framework (SMAF) in assessment soil quality</b> <i>Sena PACCI,</i> <i>Orhan DENGİZ</i></p> <p><b>The relationships between tobacco quality and yield with engineering properties of Akhisar region soils of Turkey</b> <i>Sezai DELIBACAK,</i> <i>Esra PARLAKLAR</i></p> <p><b>Soiling Young People: Development of soils-related educational projects to the youth in Latin America</b> <i>Axel CERÓN-GONZÁLEZ,</i> <i>Martha D. BOBADILLA-BALLESTEROS,</i> <i>Thania Alejandra GARCÍA-ZEFERINO,</i> <i>Sol MORENO-ROSO,</i> <i>Carmina GÁMEZ-BARAJAS,</i> <i>Daniela Fernanda VARGAS-RODRÍGUEZ,</i> <i>Jesús ACEVES-ROMERO,</i> <i>Elizabeth SOLLEIRO-REBOLLEDO</i></p>
<b>16:15-16:30</b>	<b>BREAK</b>	





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HOUR	ROOM A	ROOM B
	<b>Chair : Rıdvan KIZILKAYA</b>	<b>Chair : Coşkun GÜLSER</b>
16:30-17:30	<b>Subtropical Mountainous soil diversity in southern Mexico</b> <i>Alma BARAJAS,</i> <i>Axel CERÓN-GONZÁLEZ</i>	<b>Responses of plant growth stimulators in strawberry (<i>Fragaria Ananassa</i>) to zinc application</b> <i>Füsun GÜLSER,</i> <i>Ferit SÖNMEZ</i>
	<b>Research and mapping of the liberated soils of Azerbaijan</b> <i>Garib MAMMADOV,</i> <i>Konul GAFARBAYLI</i>	<b>Zinc and nitrogen fertilization affects mineral composition of wheat grain</b> <i>Ranko ČABILOVSKI,</i> <i>Maja MANOJLOVIĆ,</i> <i>Klara PETKOVIĆ,</i> <i>Dragan KOVAČEVIĆ,</i> <i>Mirna ŠTRBAC</i>
	<b>Soil microbial activities under different management practices in mountain meadows: A Review</b> <i>Rabiu Kabo ALHASSAN,</i> <i>Agnieszka JÓZEFOWSKA</i>	<b>Role of metal-based nanomaterials in plant growth</b> <i>Hazrat AMIN,</i> <i>Tatiana MINKINA,</i> <i>Svetlana SUSHKOVA,</i> <i>Vishnu D. RAJPUT,</i> <i>Arpna KUMARI,</i> <i>Orhan DENGİZ,</i> <i>Coşkun GÜLSER,</i> <i>Rıdvan KIZILKAYA</i>
	<b>Details of particle-size distribution of Calcic Chernozem by the Regional Soil-Geographic database (on the example of the Rostov region)</b> <i>Veronica BOLDYREVA,</i> <i>Anton MEZHENKOV,</i> <i>Yuryi LITVINOV,</i> <i>Olga BEZUGLOVA,</i> <i>Igor MOROZOV</i>	<b>Effects of Zinc oxide nanoparticles on the content of proline in spring barley</b> <i>Marina VOLOSHINA,</i> <i>Tatiana MINKINA,</i> <i>Vishnu D. RAJPUT,</i> <i>Evgeniy VECHKANOV,</i> <i>Hadeer ELGENDI,</i> <i>Maria KREPAKOVA,</i> <i>Anna NEFEDOVA</i>
17:30-18:00	<b>DISCUSSION &amp; CLOSING</b>	





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