2021 2nd International Symposium on Water, Ecology and Environment (ISWEE 2021)

Conference Program

(China Standard Time/Beijing Time, GMT +08:00)

October 15-18, 2021 Online

www.iswee-conf.com

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Join a Meeting & Test

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Meeting for test:
Time: **October 14, 2021, Thursday**
09:00-12:00 & 19:00-22:00 (Beijing Time, GMT +08:00)
VooV Meeting Room: **Test Meeting for ISWEE 2021**
VooV Meeting ID: **211 493 690**
Accessing Link: **https://meeting.tencent.com/dm/LlR162lJUiG4**

Part I Conference Schedule

October 15, 2021, Friday

Time	Schedule
Plenary Session **VooV Meeting ID: 831 759 594** **Accessing Link: https://meeting.tencent.com/dm/JzEVHA2keSdi**	
09:00-09:10	Welcome Speech *Prof. Guoguang Wen, Beijing Jiaotong University, China* *Prof. Zhongkai Feng, Hohai University, China*
Chair: *Prof. Hossam Gaber, Ontario Tech University, Canada*	
09:10-09:50	Plenary Speech 1: *Resilient Energy Systems for Waterfront Infrastructures and Maritime Transportation Electrification for Smart Cities* *Prof. Hossam Gaber, Ontario Tech University, Canada*
09:50-10:30	Plenary Speech 2: *Systems Approach to Management of Water Resources-toward Performance based Water Resources Engineering* *Prof. Slobodan P. Simonovic, The University of Western Ontario, London, Ontario, Canada*
10:30-11:10	Plenary Speech 3: *Interactions of Nanocellulose and Water: Advances in Fundamental Insights, Properties and Applications* *Prof. Richard J. Spontak, North Carolina State University, USA*
BREAK TIME	
Chair: *Prof. Zhongkai Feng, Hohai University, China*	
19:00-19:40	Plenary Speech 4: *Water - The Global Challenge and Everybody's Business: Social & Technological Perspective* *Prof. Iqbal M. Mujtaba, University of Bradford, UK*
19:40-20:20	Plenary Speech 5: *Faunal Response to Wetland Mitigation* *Prof. James T. Anderson, Clemson University, USA*

October 16, 2021, Saturday

Time	Schedule
09:00-12:00	Oral Session 1: Environmental Pollution and Protection **VooV Meeting ID: 367 393 796** **Accessing Link: https://meeting.tencent.com/dm/ogdDpPdAwoMx**
BREAK TIME	
19:00-22:00	Oral Session 2: Water Resources and Hydrology (I) **VooV Meeting ID: 666 801 368** **Accessing Link: https://meeting.tencent.com/dm/BJ4ph0LYXMMJ**

October 17, 2021, Sunday

Time	Schedule
09:00-12:00	Oral Session 3: Water and Wastewater Treatment **VooV Meeting ID: 332 320 074** **Accessing Link: https://meeting.tencent.com/dm/PfAJCGSYgN8b**
BREAK TIME	
19:00-23:00	Oral Session 4: Climate Change and Ecosystem **VooV Meeting ID: 878 387 084** **Accessing Link: https://meeting.tencent.com/dm/o7U93VQL3bAC**

October 18, 2021, Monday

Time	Schedule
09:00-12:00	Oral Session 5: Water Resources and Hydrology (II) **VooV Meeting ID: 287 217 680** **Accessing Link: https://meeting.tencent.com/dm/eO9LxqZVZACG**
19:00-23:00	Oral Session 6: Sustainability and Society **VooV Meeting ID: 453 744 112** **Accessing Link: https://meeting.tencent.com/dm/lqFhb5eyTjez**

Part II Plenary Speeches

Plenary Speech 1: Resilient Energy-Water-Transportation Infrastructures for Smart Cities

Speaker: Prof. Dr. Hossam Gaber
Professor, Ontario Tech University, Canada

Short Biography: Dr. Gabbar is a full Professor in the Faculty of Energy Systems and Nuclear Science, and cross appointed in the Faculty of Engineering and Applied Science, at Ontario Tech University (UOIT), where he has established the Energy Safety and Control Lab (ESCL), Smart Energy Systems Lab, and Advanced Plasma Engineering Lab. He is the recipient of the Senior Research Excellence Aware for 2016, UOIT. He is recognized among the top 2% of worldwide scientists with high citation in the area of energy. He is leading national and international research in the areas of smart energy grids, energy safety and control systems, and waste to energy using advanced plasma technologies. Dr. Gabbar obtained his B.Sc. degree in 1988 with first class of honor from the Faculty of Engineering, Alexandria University (Egypt). In 2001, he obtained his Ph.D. degree from Okayama University (Japan). From 2001 till 2004, he joined Tokyo Institute of Technology (Japan), as a research associate. From 2004 till 2008, he joined Okayama University (Japan) as an Associate Professor, in the Division of Industrial Innovation Sciences. From 2007 till 2008, he was a Visiting Professor at the University of Toronto. He also worked as process control, safety, and automation specialist in energy and oil & gas industries. Dr. Gabbar has more than 230 publications, including patents, books / chapters, journal and conference papers.

Abstract of the speech: This talk will present research planning, design and control strategies of hybrid energy systems for waterfront infrastructures and maritime transportation electrification. The talk will include energy-water-transportation infrastructures, autonomous and electric maritime, and possible design and operation options towards smart cities and communities. The talk will cover resilient interconnected micro energy grids for waterfront infrastructures and fast charging systems for both waterfront communities and maritime systems. Autonomous marine systems and illustrated with possible designs and deployment strategies. Small scale waste-to-energy technologies will also be discussed and their integration and deployment strategies will be explained in waterfront communities and maritime systems. Design, planning and operation strategies of hybrid energy systems will be discussed and their possible implementations in waterfront infrastructures and marine transportation to ensure highest overall performance, reduced risks, and minimum gaps with user requirements and demands. The talk will include discussions on the design of hybrid energy systems for emergencies and different weather conditions. The talk will discuss possible technologies and their deployment and integration, and key innovations for industrial collaborations.

Plenary Speech 2: Systems Approach to Management of Water Resources-toward Performance Based Water Resources Engineering

Speaker: Prof. Dr. Slobodan P. Simonovic
Fellow CSCE, ASCE and IWRA, D.WRE
Fellow, Royal Society of Canada
Fellow, Canadian Academy of Engineering
Professor Emeritus, Department of Civil and Environmental Engineering
Director of Engineering Works, Institute for Catastrophic Loss Reduction
The University of Western Ontario, London, Ontario, Canada

Short Biography: Slobodan P. Simonovic is universally acknowledged as one of the world's leading authorities on application of Systems Analysis to water and environmental management. He advanced the understanding of water and environmental systems, by providing decision-makers with tools to support their sustainable management. He provides unparalleled contributions to global and local management of water that have improved the lives and livelihoods of millions of people worldwide. His work has a significant impact on our understanding of system linkages between humans, and build and natural environments that lead to sustainable water resources management and resilience as a new development paradigm.

Abstract of the speech: Global change, that results from population growth, global warming and land use change (especially rapid urbanization), is directly affecting the complexity of water resources management problems and the uncertainty to which they are exposed. Both, the complexity and the uncertainty, are the result of dynamic interactions between multiple system elements within three major systems: (i) the physical environment; (ii) the social environment; and (iii) the constructed infrastructure environment including pipes, roads, bridges, buildings, and other components. Recent trends in dealing with complex water resources systems include consideration of the whole region being affected, explicit incorporation of all costs and benefits, development of a large number of alternative solutions, and the active (early) involvement of all stakeholders in the decision-making. Systems approaches based on simulation, optimization, and multi-objective analyses, in deterministic, stochastic and fuzzy forms, have demonstrated great success in supporting effective water resources management in the last half a century. This presentation explores the future opportunities that will utilize advancements in systems theory that might transform water resources management on a broader scale. The presentation focuses on performance-based water resources engineering as a methodological framework to extend the role of the systems approach by integrating it with the concept of quantitative resilience.

Plenary Speech 3: Interactions of Nanocellulose and Water: Advances in Fundamental Insights, Properties and Applications

Speaker: Prof. Dr. Richard J. Spontak
Fellow, American Physical Society
Fellow, Royal Society of Chemistry
Distinguished Professor, Departments of Chemical & Biomolecular Engineering and Materials Science & Engineering, North Carolina State University, USA

Short Biography: Richard Spontak received his B.S. and Ph.D. degrees in Chemical Engineering from Penn State University and UC Berkeley, respectively. He has >290 peer-reviewed journal publications and >35 book chapters and invited works, and his research has been featured on 30 journal covers and cited over 13,000 times. He has received numerous honors including the ACS Chemistry of Thermoplastic Elastomers Award, the IOM3 Colwyn Medal and the SPE International Award. A fellow of the American Physical Society and the Royal Society of Chemistry, he is a member of the Norwegian Academy of Technological Sciences and a Distinguished Professor at NC State University.

Plenary Speech 4: Water - The Global Challenge and Everybody's Business: Social & Technological Perspective

Speaker: Prof. Dr. Iqbal M. Mujtaba
Fellow IChemE
Professor, Chemical Engineering Department, University of Bradford, UK

Short Biography: Iqbal M. Mujtaba is a Professor of Computational Process Engineering and is currently Associate Dean (Learning, Teaching & Quality) of the Faculty of Engineering & Informatics at the University of Bradford. He was Head of the School of Engineering at the University of Bradford from 2016-2018. He obtained his BSc Eng and MSc Eng degrees in Chemical Engineering from Bangladesh University of Engineering & Technology (BUET) in 1983 and 1984 respectively and obtained his PhD from Imperial College London in 1989. He is a Fellow of the IChemE, a Chartered Chemical Engineer, and the Chair of the IChemE's Computer Aided Process Engineering Special Interest Group. He was the Chair of the European Committee for Computers in Chemical Engineering Education from 2010-2013. He is currently an Associate Editor for Asia Pacific Journal of Chemical Engineering, South African Journal in Chemical Engineering, Chemical Product & Process Modelling and an Editorial Board Member of the journals Processes, Energies and Desalination.

Professor Mujtaba leads research into dynamic modelling, simulation, optimisation and control of batch and continuous chemical processes with specific interests in distillation, industrial reactors,

refinery processes, desalination, wastewater treatment and crude oil hydrotreating focusing on energy and water. He has managed several research collaborations and consultancy projects with industry and academic institutions in the UK, Italy, Hungary, Malaysia, Thailand, India, Qatar, South Africa, Iraq, Algeria, China, Libya, Bahrain and Saudi Arabia. He has published more than 350 technical papers and has delivered more than 75 invited lectures/seminars/plenaries/keynotes/short courses around the world. He has supervised 35 PhD students to completion and is currently supervising 8 PhD students. He is the author/co-author of (1) 'Batch Distillation: Design & Operation' (text book) published by the Imperial College Press, London, 2004 (2) 'Wastewater treatment by Reverse Osmosis' published by CRC Press, 2020. He is one of the co-editors of the books (1) 'Application of Neural Networks and Other Learning Technologies in Process Engineering', Imperial College Press, London, 2001 (2) 'Composite Materials Technology: Neural Network Applications' CRC Press, 2009, (3) 'The Water-Food-Energy Nexus', CRC Press, 2017, (4) 'Water Management: Social & Technological Perspective', CRC Press, 2018.

Abstract of the speech: Thirty three percent of the world population do not have decent toilet and 11% of the world population do not have clean water close to home. Globally, about 2 billion people use a drinking water source contaminated with faeces. Quality water and quality life go hand in hand. The food we eat, the house we live in, the transports we use and the things we cannot do without in 24/7/365 determine our quality of life and require sustainable and steady water supplies. Exponential growth in population and improved standards of living require increasing amount of freshwater and are putting serious strain on the quantity of naturally available freshwater around us. The Ancient Mariners' rime: "Water, water everywhere/Not a drop to drink" is in line with 97% of the planet's water being either salty or undrinkable. By the year 2030, the global needs of water would be 6900 billion m3/day compared to 4500 billion m3/day required in 2009. Currently the demand for freshwater is increasing by 64 billion cubic meters a year while the world's population is growing by roughly 80 million a year. At present, more than 20% of the world's population live in areas of physical scarcity of water. Moreover, around 25% of the world's population face economic water shortage where their countries lack the appropriate infrastructure to take water from the source.

As the world population grows, the heavily industrialised world we live or strive to live continues to generate vast volumes of wastewater plagued with industrial effluents, sewage, and many harmful, some carcinogenic, by-products, which are often simply disposed of in rivers and oceans. Contaminated water transmits diseases such as diarrhoea, cholera, dysentery, typhoid, and polio cause over half a million diarrhoeal death each year. The yuck factor, the terms such as recycled sewage and toilet-to-tap used by media in characterizing reclaimed water, give significant negative images to augment reclaimed wastewater reuse, especially for drinking and agricultural production purposes. Although farmers of many countries do not perceive any problem with the quality of the yield produced by wastewater, the social acceptability of the use of wastewater for agriculture is poor.

Global thirst will turn million into water refugees. The disputes over water will inevitably become more common, as 220 river basins globally are shared by two or more countries and scarcity of water can lead to riots. Without more effective water management systems, lack of water availability will become a problem threatening national security in many countries.

Water insecurity is not an issue that can be understood from the perspective of one discipline. Water affects everybody. Apart from the technological, scientific and engineering dimensions, there is an essential social dimension to water insecurity. Although some of the technological problems being faced regarding the water security and water management could easily be resolved in a matter of years, social and political issues regarding water management will take much longer time to resolve. This talk will highlight some of the social and technical issues around water which is a grand challenge of the world requiring multidisciplinary approach for the solution.

Plenary Speech 5: Faunal Response to Wetland Mitigation

Speaker: Prof. Dr. James T. Anderson
Director, James C. Kennedy Waterfowl and Wetlands Conservation Center, Clemson University, USA

Short Biography: Dr. James T. (Jim) Anderson is James C. Kennedy Endowed Chair of Waterfowl and Wetland Ecology and the Director of the James C. Kennedy Waterfowl and Wetlands Conservation Center at Clemson University. Previously he was a professor of wildlife ecology and management and the Davis-Michael Professor of Forestry and Natural Resources at West Virginia University, USA. He earned a B.S. in wildlife from the University of Wisconsin-Stevens Point, an M.S. in range and wildlife management through the Caesar Kleberg Wildlife Research Institute at Texas A&M University-Kingsville, and a Ph.D. in wildlife science from Texas Tech University. Jim has published over 160 scientific research articles on wetland ecology and management, wildlife-habitat relationships, and restoration ecology. He has mentored more than 50 graduate students and has garnered more than $28 million in competitive external funding to support his research. He has been an invited keynote speaker at over 15 international conferences, serves on numerous committees, and has served on the editorial board of 7 international journals. He teaches a number of courses including Restoration Ecology, Applied Wetlands Ecology and Management, Introduction to Wildlife and Fisheries Resources, Big Game Ecology and Management, and Waterfowl Ecology.

Abstract of the speech: Wetlands are defined as transitional areas between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. In the United States, when a wetland is converted to a non-wetland, a new wetland must be created, or a former wetland must be restored to mitigate for the loss of wetland function. One primary function of wetlands is providing wildlife diversity and wildlife habitat. Over the past 20 plus years, my students and I have studied wetland biodiversity and ecosystem functions of mitigated and natural wetlands of Central Appalachian Mountains, USA. Bird species richness, diversity, and abundance were similar between mitigated and reference wetlands. Waterbird and waterfowl abundance were higher in mitigated than reference wetlands. Anuran (frog and toad) species richness and abundance were higher in mitigated than reference wetlands. Mean total percent cover of plant species was similar between mitigated and reference wetlands. Plant species richness, evenness, and diversity were greater in mitigated than reference wetlands. Plant compositional differences become

smaller as mitigated sites age. Mitigated and reference wetlands supported similar invertebrate assemblages, especially among benthic populations. Abundance of metamorphs, survival, and growth of larval green frogs (Lithobates clamitans) and spring peepers (Pseudacris crucifer) were similar between wetland types. Corticosterone levels, a hormone associated with stress, was lower in spotted salamanders (Ambystoma maculatum) that occurred in larger created wetlands. Diet composition and selection of invertebrate food items by adult red-spotted newts (Notophthalmus viridescens) was nonrandom but was only minimally affected by wetland type. Created wetlands on agricultural lands had higher percentages of tree coverage and a higher proportion of agricultural land in the areas immediately surrounding the wetland. In these same wetlands, apparent avian species richness and the occupancy probability of four common bird species did not differ between ACEP and reference sites. Water quality varied among wetlands but was similar between mitigated and natural wetlands. Results suggest that wildlife communities may respond more favorably than plant communities, but in many circumstances mitigated wetlands and natural wetlands are functionally and compositionally similar when restoration is properly conducted.

Part III Poster Presentations

Presentation Link: https://www.iswee-conf.com/#/listofeposters

Paper ID	Paper Title & Presenter
ISWEE-MS-1342	Conflicts in the heart of the urban space: A case study of public transport drivers *I. Arneault-Leger, University of Angers, France*
ISWEE-MS-1396	Peculiarities of ibuprofen sorption from aqueous medium on modified potato starch *Karolina Almonaityte, Kaunas University of Technology, Lithuania*
ISWEE-MS-1430	The common dolphin in the bay of algeciras. natural and anthropogenic threats. Protection area proposal for its conservation in the area *Liliana Olaya Ponzone, University of Seville, Spain*
ISWEE-MS-1448	Phycoremediation as strategy for secondary urban wastewater treatment *Paride Salvatore Occhipinti, University of Catania, Italy*
ISWEE-MS-1451	Combination of field sampling and multispectral remote-sensing to study the development of intertidal macroalgal communities at local scale in Western Brittany *Wendy Diruit, Université de Bretagne Occidentale – LEMAR, France*
ISWEE-MS-1464	Land-based surveys and citizen science to monitor the migration of fin whales and other cetaceans through a special area of conservation in the Eastern Strait of Gibraltar *Rocio Espada Ruiz, University of Seville, Spain*
ISWEE-MS-1486	Influence of atmospheric pressure surges on the level of suprapermafrost waters and the flow of small rivers (Anadyr Lowland, Chukotka) *Tregubov Oleg, Shilo Northeastern Integrated Research Institute, Far Eastern Division, Russian Academy of Sciences, Russia*

Part IV Oral Presentations

Online Live Presentation

- Online live presentations will be conducted via VooV Meeting.
- The duration of each invited speech is 25 minutes, including 1-3 minutes of Q&A.
- The duration of each regular oral presentation is 15 minutes, including 1-3 minutes of Q&A.
- All presenters are requested to reach the Online Session Room prior to the schedule time and complete their presentation on time.
- All presentation times are shown in China Standard Time/Beijing Time (GMT +8:00).
- If a presenter cannot show up on time or have problem with internet connect, the session chair has the right to rearrange his/her presentation, and let the next presentation start.

Pre-recorded Video Presentation

- A pre-recorded video file (in .MP4 format) is required and the length of each video is 15-20 minutes. Please make the video record and send it to the Organizing Committee in advance.
- Videos will be played at the end of each session by the Organizing Committee.
- The audience may contact the presenter directly via email for questions and discussions after viewing the video.

Oral Session_1 Environmental Pollution and Protection

Time: **October 16, 2021, Saturday, 09:00--**
VooV Meeting ID: **367 393 796**
Accessing Link: **https://meeting.tencent.com/dm/ogdDpPdAwoMx**
Session Chair: **Dr. Jingrang Lu, United States Environmental Protection Agency, USA**

Time	Paper ID	Paper Title & Presenter
09:00-09:25	ISWEE-MS-1406 (Invited Talk)	Cyanotoxin-encoding genes as a powerful marker to predict cyanobacterial harmful algal blooms and cyanotoxin production: a confirmation study in an inland freshwater lake *Jingrang Lu, United States Environmental Protection Agency, USA*
09:25-09:40	ISWEE-MS-1367	A smart IoT farming solution to monitor tropical environments *Carlos Javier González, Autonomous University of Chiriqui, Panama*
09:40-09:55	ISWEE-MS-1335	Multi-criteria evaluation of best available treatment technology for waste lead-acid battery: The case of China *Wei Wang, Beijing University of Technology, China*

09:55-10:10	ISWEE-MS-1429	Hierarchically Porous Polyacrylonitrile (PAN) 3D architectures as free-standing adsorbents for heavy metal removal and lithium separation *Gang Wang, Dongguan University of Technology, China*
10:10-10:25	Short Break	
10:25-10:40	ISWEE-MS-1329	Conjunction of *Vetiveria zizanioides* L. and oil-degrading bacteria as a promising technique for remediation of crude oil-contaminated soils *Zahra Kiamarsi, Ferdowsi University of Mashhad, Iran*
10:40-10:55	ISWEE-MS-1419	Electrostatic switching of stereoselectivity in aldol reactions *Lijuan Yu, Australian National University, Australia*
10:55-11:10	ISWEE-MS-1480	A game theory approach in quality classification and secondary use of electric vehicle used batteries *Cailiang Yao, Nanjing University of Science and Technology, China*
11:10-11:25	ISWEE-MS-1369	Anthropogenic contamination of the Atoyac River, México *Estrada Rivera Andrés, Benemérita Universidad Autónoma de Puebla, México*
11:25-11:40	ISWEE-MS-1440	Cell biological effects of long-term exposure to electromagnetic field of simulated mobile phones *Sara Khodahemmati, Beijing University of Technology, China*
Video	ISWEE-MS-1323 (Invited Talk)	Correlation between air pollution and ACE/ACE2 pathway: possible implication in COVID-19 pandemic *Paola Palestini, University Milano-Bicocca, Italy*
Video	ISWEE-MS-1321	Modelling of aromatic sulfur compounds adsorption from hydrocarbon fuels by biochar-based adsorbent *Ivan Uzunov, Institute of General and Inorganic Chemistry, Bulgarian Academy of Sciences, Bulgaria*
Video	ISWEE-MS-1373	Assessment and source apportionment of heavy metals (HMs) in agricultural soil at a typical karst area with superposition of multiple pollution *Qiuye Zhang, Guizhou University, China*
Video	ISWEE-MS-1423	Plants significantly increase negative air ion concentration: results from a phytotron experiment *Benzhi Zhou, Research Institute of Subtropical Forestry, Chinese Academy of Forestry, China*
Video	ISWEE-MS-1377	Adsorption and degradation of phenoxyalkanoic acid herbicides in soils: A review *Tadeusz Paszko, University of Life Sciences in Lublin, Poland*
Video	ISWEE-MS-1474	Monitoring of leaching of potentially toxic substances from geotechnical composites made of recycled wastes *Janez Turk, Slovenian National Building and Civil Engineering Institute (ZAG), Slovenia*

Video	ISWEE-MS-1496	Recovery of metals from mine tailings by electro-phytoremediation with ryegrass: alternate vs direct electric current *Hassay Lizeth Medina Díaz, University of Castilla-La Mancha, Spain*
Video	ISWEE-MS-1500	Kinetics of nanoparticles nucleation/growth and control of the Pt/C catalysts microstructure *Vladimir Guterman, Southern Federal University, Russia*

Oral Session_2 Water Resources and Hydrology (I)

Time: **October 16, 2021, Saturday, 19:00--**
VooV Meeting ID: **666 801 368**
Accessing Link: **https://meeting.tencent.com/dm/BJ4ph0LYXMMJ**
Session Chairs: **Prof. Julian David Hunt, International Institute for Applied Systems Analysis, Austria; Dr. Massimiliano Bordoni, University of Pavia, Italy**

Time	Paper ID	Paper Title & Presenter
19:00-19:15	ISWEE-MS-1317	About modern problems of state regulation of operation on a territory situated surrounded large hydroelectric power plants dams *Mitina Natalia N., Lomonosov Moscow Stater University, Russia*
19:15-19:30	ISWEE-MS-1325	Numerical investigation on motion responses of floating structures by application of swarm intelligence *Sheikh Fakhruradzi Bin Abdullah, University of Malaysia Terengganu, Malaysia*
19:30-19:45	ISWEE-MS-1330	Identification of critical nodes in water distribution networks *Thapelo C. Mosetlhe, Tshwane University of Technology / University of South Africa, South Africa*
19:45-20:00	ISWEE-MS-1346	Drone and AI to locate malfunctioning in an apple orchard irrigation system *Magalie Delalande, UMR AGAP Institut, Univ Montpellier, CIRAD, INRAE, Institut Agro, France*
20:00-20:25	ISWEE-MS-1409 (Invited Talk)	Global resource potential of seasonal pumped hydropower storage for energy and water storage *Julian David Hunt, International Institute for Applied Systems Analysis, Austria*
20:25-20:40	ISWEE-MS-1476	Efficiency of machine learning and neuro-fuzzy models to estimate soil water content at a given matric potential *Samaneh Amanabadi, Islamic Azad University, Iran*
20:40-20:55	Short Break	
20:55-21:10	ISWEE-MS-1483	Bioeconomy as a way of development and sustainability: a study focused on the field of water *Ana Batlles-delaFuente, University of Almería, Spain*

21:10-21:25	ISWEE-MS-1484	Modelling the effects of green infrastructures on water quantity under different rainfall characteristics *Qian Yu, China Institute of Water Resources and Hydropower Research, China*
21:25-21:40	ISWEE-MS-1491	Estimation of shallow landslides runout through a data driven approach: preliminary results *Alessia Giarola, University of Pavia, Italy*
21:40-22:05	ISWEE-MS-1305 (Invited Talk)	Asymmetric evaporation and transport of liquid droplets in beak-shaped grooves *Jiangtao Cheng, Virginia Tech, USA*
22:05-22:20	ISWEE-MS-1401	Defining flood vulnerability in urban and rural areas through soil moisture spatial patterns *Judith Ramos, Instituto de Ingeniería, UNAM, Mexico*
22:20-22:35	ISWEE-MS-1426	Analysis of changes in the content of heavy metals in groundwater in the area of old municipal solid waste landfills *Anna Podlasek, Warsaw University of Life Sciences, Poland*
22:35-23:00	ISWEE-MS-1490 (Invited Talk)	A model for shallow landslides occurrence exploiting ERA5 dataset *Massimiliano Bordoni, University of Pavia, Italy*
23:00-23:15	ISWEE-MS-1460	Use of remote sensing to evaluate performance of irrigation districts and small irrigated areas *Enrique Palacios Velez, Colegio de Postgraduados, Mexico*
23:15-23:40	ISWEE-MS-1375 (Invited Talk)	Complex hydrogeological processes in deep-seated landslides evidenced by integrated groundwater and slope movements monitoring in the Northern Apennines (Italy) *Marco Mulas, University of Modena and Reggio Emilia, Italy*
23:40-00:05	ISWEE-MS-1507 (Invited Talk)	A simple graphical solution to estimate surface soil moisture availability and evapotranspiration fraction using thermal/optical imagery *Toby Carlson, Penn State University, USA*

Oral Session_3 Water and Wastewater Treatment

Time: **October 17, 2021, Sunday, 09:00--**
VooV Meeting ID: **332 320 074**
Accessing Link: **https://meeting.tencent.com/dm/PfAJCGSYgN8b**
Session Chair: **Dr. Xiaoqiu Yang, Jianghan University, China**

Time	Paper ID	Paper Title & Presenter
09:00-09:15	ISWEE-MS-1364	Bromine and iodine species in drinking water supply system along the Changjiang River in China: occurrence and transformation *Xiaoqiu Yang, Jianghan University, China*

09:15-09:30	ISWEE-MS-1374	BOD5, COD, and surfactants in discharge water in the vicinity of a tannery in Salcedo, Ecuador *Ricardo Urrutia-Goyes, Universidad de las Fuerzas Armadas ESPE, Ecuador*
09:30-09:45	ISWEE-MS-1390	Statistical analysis of wastewater discharge in Yunnan Province 2015-2020 *Na Dou, Kunming Medical University, China*
09:45-10:00	ISWEE-MS-1447 (Invited Talk)	Fungal biotechnology for organochlorine compounds removal from water: multiple approaches *Maria Pilar Serbent, State University of Santa Catarina, Brazil*
10:00-10:15	ISWE-MS-1482	Influence of influent quality and operational modes on the excessive growth of filamentous bacteria in Kuwait's activated sludge systems *Abdallah Abusam, Kuwait Institute for Scientific Research, Kuwait*
10:15-10:40	ISWEE-MS-1508 (Invited Talk)	Removal of emerging contaminants in water *Chedly Tizaoui, Swansea University, UK*
Video	ISWEE-MS-1398 (Invited Talk)	Functional materials for emerging technologies using supercritical water as green solvent *Florentina Maxim, "Ilie Murgulescu" Institute of Physical Chemistry, Romania*
Video	ISWEE-MS-1400	Changes in bacterial community structure in wastewaters in the presence of Saccharomyces cerevisiae and benzalkonium chloride *Laura Žorža, University of Latvia, Latvia*
Video	ISWEE-MS-1381	OMSD – An open membrane system design tool *Fynn Aschmoneit, Aalborg University, Denmark*
Video	ISWEE-MS-1382	The use of Deep Eutectic Solvents to remove dyes from water: influence of their structures *Lorena Villar Blanco, University of Vigo, Spain*
Video	ISWEE-MS-1397	Adsorption and flocculation of water pollutants by using modified potato starch derivatives *Karolina Almonaityte, Kaunas University of Technology, Lithuania*
Video	ISWE-MS-1427	Electro-Nanofiltration membranes for high-efficient ion separation *Liang Ge, University of Science and Technology of China, China*

Oral Session_4 Climate Change and Ecosystem

Time: **October 17, 2021, Sunday, 19:00--**
VooV Meeting ID: **878 387 084**
Accessing Link: **https://meeting.tencent.com/dm/o7U93VQL3bAC**
Session Chair: **Dr. Hu Yang, Alfred Wegener Institute for Polar and Marine Research, Germany**

Time	Paper ID	Paper Title & Presenter
19:00-19:15	ISWEE-MS-1469	Risk sensitivity in fishery models: Mathematical perspective *Zhihao Qiao, The University of Queensland, Australia*

19:15-19:30	ISWEE-MS-1304	Poleward shifting of the large-scale ocean circulation under global warming *Hu Yang, Alfred Wegener Institute for Polar and Marine Research, Germany*
19:30-19:45	ISWEE-MS-1319	Identifying high-risk areas of dengue by meteorological factors in Thailand *Uma Langkulsen, Thammasat University, Thailand*
19:45-20:00	ISWEE-MS-1347	Recent Norwegian research relevant for evacuation, search and rescue under arctic conditions *Ove T. Gudmestad, University of Stavanger/ University of Tromsoe, Western Norway University College, Haugesund, Norway*
20:00-20:15	Short Break	
20:15-20:30	ISWEE-MS-1389 (Invited Talk)	A scientometric review of the impacts of global climate change towards marine biodiversity research and ecosystem services: The rise and progress *Mohamad N. Azra, Universiti Malaysia Terengganu, Malaysia*
20:30-20:55	ISWEE-MS-1425 (Invited Talk)	Pharmaceutically active compounds as emerging plant stressors *Vasileios Fotopoulos, Cyprus University of Technology, Cyprus*
20:55-21:10	ISWEE-MS-1345	Climate change and psychology: Effects of rapid global warming on violence and aggression *Andreas Miles-Novelo, Iowa State University, USA*
21:10-21:35	ISWEE-MS-1502 (Invited Talk)	Analysis of bycatches of two related anadromous shad species in fisheries along the Galician Atlantic Coast (NW Iberian Peninsula, Southwest Europe): Assessment of the problem, data on biology and ecology and proposals for protection and management *David José Nachón García, Universidade de Santiago de Compostela, Spain*
21:35-21:50	ISWEE-MS-1509	Paleohydrological evolution during late Oligocene to early Miocene: indicated by trace element ratio of Ostracod shells in the western Qaidam Basin *Wei Chen, Northwest University, China*
Video	ISWEE-MS-1414 (Invited Talk)	Aquatic microplastic research-A critique and suggestions for the future *Judith S. Weis, Rutgers University, USA*
Video	ISWEE-MS-1358	Biological invasions in European Seas: Amphipods (Crustacea: Amphipoda) as a model group *M. Pilar Cabezas, University of Porto, Portugal*
Video	ISWEE-MS-1379	Arabidopsis thaliana as Bio-indicator of Particulate Matter ability to Induce Oxidative Stress in Living Organisms *Lorenzo Massimi, Sapienza University of Rome, Italy*
Video	ISWEE-MS-1441	Evaluation of Heartrot Caused Phellinus Pini and Related Yield Loss in Pinus Sylvestris Stands *Ziedonis Miklašēvičs, Rezekne Academy of Technologies, Latvia*

Video	ISWEE-MS-1497	Transgressive architecture of coastal barrier systems in the Ofanto incised valley and its surrounding shelf in response to stepped sea-level rise *Vincenzo De Santis, Università degli Studi di Bari "Aldo Moro", Italy*

Oral Session_5 Water Resources and Hydrology (II)

Time: **October 18, 2021, Monday, 09:00--**
VooV Meeting ID: **287 217 680**
Accessing Link: **https://meeting.tencent.com/dm/eO9LxqZVZACG**

Time	Paper ID	Paper Title & Presenter
Video	ISWEE-MS-1435	Water-saving strategies in the face of water shortage crisis: a case study of science museum in Taiwan *Yu-Hung Wang, National Science and Technology Museum*
Video	ISWEE-MS-1444	Study of the competence of cadets of military universities in the organization of rational water use and water management *Olga V. Selezneva, Omsk Automobile Armored Engineering Institute, Russia*
Video	ISWEE-MS-1449	Chemical characterization in hydraulic fracturing flowback and produced water (HF-FPW) of shale gas in Sichuan of China *Mingyang Xiong, Southwest Petroleum University, China*
Video	ISWEE-MS-1471	Research on egg-shaped pressure hulls of deep manned submersibles *Jian Zhang, Jiangsu University of Science and Technology, China*
Video	ISWEE-MS-1487	Variation of chlorine concentration in a lab scale water distribution system *Rojacques Mompremier, Universidad Autónoma Metropolitana, Mexico*
Video	ISWEE-MS-1458	Morphometric Analysis by using Remote Sensing & QGIS approach toevaluate the aquifer response of two sub watersheds of coastal Kerala *G S Deepa Varghese, Manipal Academy of Higher Education, DIAC, UAE*
Video	ISWEE-MS-1478	Plastic and moldable metals: control synthesis of gold nanosheets in bilayer/water system *Youfeng Yue, National Institute of Advanced Industrial Science and Technology, Japan*
Video	ISWEE-MS-1472	Experimental bulging and buckling of bi-segmented cylinders *Jian Zhang, Jiangsu University of Science and Technology, China*

Oral Session_6 Sustainability and Society

Time: **October 18, 2021, Monday, 19:00--**
VooV Meeting ID: **453 744 112**
Accessing Link: **https://meeting.tencent.com/dm/lqFhb5eyTjez**
Session Chair: **Dr. Saim Memon, London South Bank University, UK**

Time	Paper ID	Paper Title & Presenter
19:00-19:25	ISWEE-MS-1310 (Invited Talk)	The scope of electrochromic triple vacuum glass on the development of COVID-secure stadium environment *Saim Memon, London South Bank University, UK*
19:25-19:40	ISWEE-MS-1468	Why do I incorporate water resources in my teaching? An international study of high school teachers' experiences during the COVID-19 Pandemic *Ching Ting Tany Kwee, The University of New South Wales, Australia*
19:40-19:55	ISWEE-MS-1479	Educators' perception on environmental education of sustainability in an Australian early learning centre *Yuk Lan Leung, University Preparation College, Australia*
19:55-20:10	ISWEE-MS-1387	Driving, personality and decision-making: a study for understanding human behaviour *Anita Bec-Gerion, Laboratoire de Psychologie des Pays de la Loire, France*
20:10-20:25	ISWEE-MS-1455	Incorporating environmental education in English-as-a-Foreign Language classrooms: Paving the way for global impact *Christina Dahee Jung, Woosong University, Korea*
20:25-20:40	Short Break	
20:40-20:55	ISWEE-MS-1457	Female environmental engineering students' career motivations and development in a male-dominated profession: A social cognitive career and motivation theory approach *Luis Miguel Dos Santos, Woosong University, Korea*
20:55-21:10	ISWEE-MS-1473	The development and reform of environmental education curriculum in Hong Kong: From teachers' perspectives *Luis Miguel Dos Santos, Woosong University, Korea*
21:10-21:25	ISWEE-MS-1462	Fatalities resulting from Human-Wildlife encounters in Botswana *Ikanyeng Gaodirelwe, Botswana Institute for Development Policy Analysis, Botswana*
21:25-21:40	ISWEE-MS-1467	Environmental education through field research in rural regions: A qualitative investigation of university postgraduate students *Luis Miguel Dos Santos, Woosong University, Korea*
21:40-21:55	ISWEE-MS-1495	Possibilities for shifting goods from road to rail freight transport in the Czech Republic *Vaclav Cempirek, College of Logistics o.p.s., Czechia*

21:55-22:20	ISWEE-MS-1322	The app is not where the action is – Discussing features of an internal communication system for a permaculture village *Anne-Marie Skriver Hansen, Malmö University, Sweden*
Video	ISWEE-MS-1420	Prospects for the sustainable development of modern architecture in the coastal cities of Algeria *Irina Bulakh, Kyiv National University of Construction and Architecture, Ukraine*
Video	ISWEE-MS-1434	Landscape structure' influence on the source of livelihood of the population: The Case of Narra, Palawan Philippines *Acero Liwayway, San Beda University Manila, Philippines*
Video	ISWEE-MS-1302	The complexity for the resource-based cities in China on creating sustainable development *Fangli Ruan, China University of Geosciences (Wuhan), China*
Video	ISWEE-MS-1461	Billion oyster project curriculum and community enterprise for restoration science (BOPCCERS) proposal for phase II expansion; career and technical education pathways *Lauren B. Birney, Pace University New York City, USA*