

# TECHNOSCAPE '23

## PROGRAMME SCHEDULE

DAY - I (Thursday 14 Dec 2023)

TIME	PROGRAMME	VENUE
11 <sup>00</sup> - 14 <sup>00</sup>	Registration	Technology Tower Main Portico
15 <sup>00</sup> - 16 <sup>00</sup>	Inauguration Ceremony Chief Guest <i>Ms. A. Dhanalakshmi, Joint Sec. DST</i> Guest of Honour <i>Mr. M. Abdul Wahab, MD, KH Group</i>	Ambedkar Auditorium, Technology Tower
16 <sup>00</sup> - 16 <sup>30</sup>	World Café – Networking and Coffee	Amphitheatre, Technology Tower
16 <sup>30</sup> - 18 <sup>00</sup>	Panel Discussion: <i>Is Water-Food-Energy Nexus: a viable option to balance Industrial Needs and Environmental Sustainability?</i>  <u>Ms. Marcella D'Souza, (MODERATOR), Director, WOTR, INDIA</u>  Mr. Sakthiaswaran K, Federal Government of Malaysia, MALAYSIA Mr. Md. Zafarullah, Managing Director, RANITEC, INDIA Dr. Rangaiah GP, Professor Emeritus, NUS, SINGAPORE Dr. Hideaki Yoshitake, Professor, Yokohama National University, JAPAN Dr. Jennifer Tamayo, FPDRI, THE PHILIPPINES Mr. Manikandan Vasudevan, Hydranautics, INDIA	Ambedkar Auditorium, Technology Tower
18 <sup>00</sup> - 18 <sup>30</sup>	B · R · E · A · K	
18 <sup>30</sup> - 20 <sup>00</sup>	raagaMudra – Cultural Fiesta	GREENOS
19 <sup>30</sup> - 21 <sup>00</sup>	Kesar – Gala Dinner	GREENOS/ FOODYS

# TECHNOSCAPE '23

## PROGRAMME SCHEDULE

D A Y - II (Friday 15 Dec 2023)

### INDO - JAPAN TECHNO - SUMMIT - 2023

TIME	PROGRAMME	VENUE
08 <sup>00</sup> - 09 <sup>00</sup>	Registrations	Dr. MGR Block Portico
09 <sup>00</sup> - 09 <sup>20</sup>	<i>Keynote Talk I – Prof. GP Rangaiah</i> Emeritus Professor, National University of Singapore, SINGAPORE  <i>Topic - Multi-Objective Optimization and Multi-Criteria Decision Making for Water and Wastewater Treatment Applications</i>	Rajaji Hall, Dr. MGR Block
09 <sup>30</sup> - 09 <sup>50</sup>	<i>Keynote Talk III – Prof. Hiromitsu Takaba</i> Dept of Environmental Chemistry and Chemical Engineering, Kogakuin University, JAPAN  <i>Topic - Advancing Water Treatment Membranes through Molecular Simulation and Machine Learning</i>	
10 <sup>00</sup> - 10 <sup>20</sup>	<i>Keynote Talk V – Prof. Tsuji Tomoya</i> Professor, Malaysia - Japan International Institute of Technology, Universiti Teknologi Malaysia, MALAYSIA  <i>Topic – Solid-liquid Equilibria for Ethanol – Water – Antipyrine and Ethanol – Water – 4-Aminoantipyrine and the Constituent Binaries</i>	

09<sup>00</sup> - 09<sup>20</sup>

**Keynote Talk II - Prof. Taro Arakawa**

Professor, Division of Intelligent Systems Engineering, Yokohama National University, JAPAN

MB 210, Smart Classroom,  
Dr. MGR Block

Topic - *Silicon photonic micro-ring resonators and their application to high-sensitivity sensors for chemicals in water*

09<sup>30</sup> - 09<sup>50</sup>

**Keynote Talk IV – Prof. Matsuda Hiroyuki**

Nihon University, JAPAN

Topic – *Thermophysical Properties for Green Separation Processes*

10<sup>00</sup> - 10<sup>20</sup>

**Keynote Talk VI – Prof. Hideaki Yoshitake**

Division of Materials Science and Chemical Engineering, Yokohama National University, JAPAN

Topic - *Recent Developments in Synthesis of Highly Efficient Adsorbents for Aqueous Pollutants Towards Sustainable Society*

10<sup>30</sup> - 10<sup>50</sup>

H<sub>2</sub>O Time – Chai pe Charcha

11<sup>00</sup> - 13<sup>00</sup>

Technical Session I - Socio Economic Initiative

Chairs : Prof. GP Rangaiah; Prof. Hiromitsu Takaba

Dr. MGR Block Lawn  
Rajaji Hall,  
Dr. MGR Block

11<sup>00</sup> - 13<sup>00</sup>

Technical Session II - Smart Sensing Technologies

Chairs: Prof. Tsuji Tomoya, Prof. Taro Arakawa

MB 210, Smart Classroom,  
Dr. MGR Block

11<sup>00</sup> - 13<sup>00</sup>

Technical Session III - Circular Economy and Resource Recovery

Chairs : Prof. Hideaki Yoshitake; Prof. Matsuda Hiroyuki

Library Conference Hall  
Central Library

13<sup>00</sup> - 14<sup>00</sup>

Luncheon

14<sup>00</sup> - 14<sup>20</sup>

**Keynote Talk VII – Prof. Tochigi Katsumi**

Academic Researcher, Nihon University, JAPAN

FOODYS  
Rajaji Hall,  
Dr. MGR Block

Topic - Evaluation of Phase Equilibria, Transport Properties and Surface Tensions for Aqueous Mixtures Using Activity Coefficient Models

14<sup>00</sup> – 14<sup>20</sup>

*Keynote Talk VIII – Dr. D. Sivakumar*  
General Manager, CETP, RANITEC, INDIA

MB 210,  
Dr. MGR Block

Topic - How to achieve Zero Liquid Discharge in Industries

14<sup>00</sup> – 14<sup>20</sup>

*Keynote Talk IX – Prof. Kazuho Nakamura*  
Academic Researcher, Yokohama National University, JAPAN

Library Conference Hall  
Central Library

Topic - Zero Liquid Discharge Process with Energy Recovery for Sustainable Water Usage

14<sup>30</sup> – 16<sup>30</sup>

Technical Session IV - Processed Water Technologies  
Chairs : Prof. Tochigi Katsumi; Dr. D. Sivakumar

Rajaji Hall,  
Dr. MGR Block

14<sup>30</sup> – 16<sup>30</sup>

Technical Session V - Sanitation and Urban Design  
Chairs : Ms. Marcella D'Souza; Dr. Pundlik Bhagat

MB 210,  
Dr. MGR Block

14<sup>30</sup> – 16<sup>30</sup>

Technical Session VI - Processed Water Technologies  
Chairs : Prof. Kazuho Nakamura; Mr. Manikandan Vasudevan

Library Conference Hall  
Central Library

16<sup>30</sup> – 16<sup>45</sup>

Brew & Connect

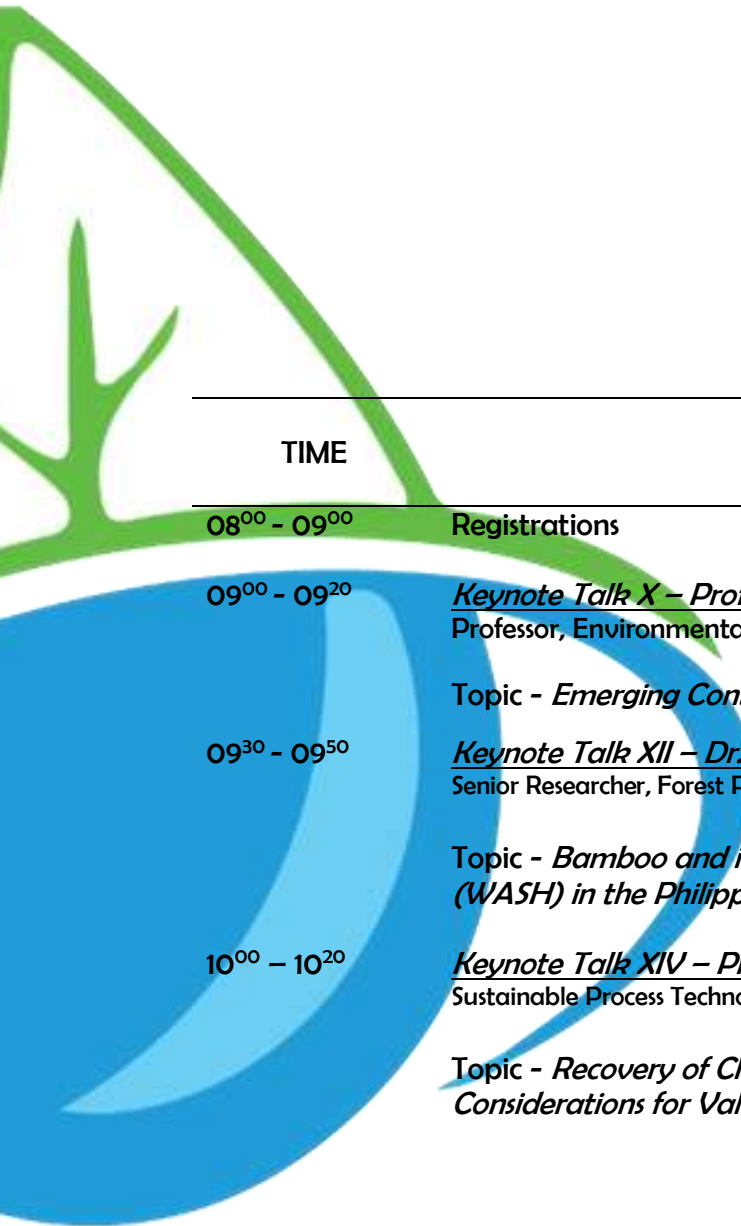
Dr. MGR Block Lawn

16<sup>45</sup> - 19<sup>30</sup>

Explore Vellore (Golden Temple Visit)

~20<sup>00</sup>

Dropping Point (Vellore New Bus Station / Vellore Fort – Vellore Old Bus station)



**TECHNOSCAPE '23**  
PROGRAMME SCHEDULE  
D A Y - III (Saturday 16 Dec 2023)

TIME	PROGRAMME	VENUE
08 <sup>00</sup> - 09 <sup>00</sup>	Registrations	Dr. MGR Block Portico
09 <sup>00</sup> - 09 <sup>20</sup>	<u><i>Keynote Talk X – Prof. Satinder Kaur Brar</i></u> Professor, Environmental Engineering, York University, CANADA  <i>Topic - Emerging Contaminants: Have we yet peaked the analysis trail?</i>	Rajaji Hall, Dr. MGR Block
09 <sup>30</sup> - 09 <sup>50</sup>	<u><i>Keynote Talk XII – Dr. Jennifer Tamayo</i></u> Senior Researcher, Forest Products Research and Development Institute, THE PHILIPPINES  <i>Topic - Bamboo and its Versatile Uses for Water Sanitation and Hygiene (WASH) in the Philippines</i>	
10 <sup>00</sup> - 10 <sup>20</sup>	<u><i>Keynote Talk XIV – Prof. Boelo Schuur</i></u> Sustainable Process Technology Group, University of Twente, THE NETHERLANDS  <i>Topic - Recovery of Chemicals from Wastewater by Adsorption: Process Considerations for Valorization Options</i>	

09<sup>00</sup> - 09<sup>20</sup>

***Keynote Talk XI – Prof. Hem Raj Pant***

Professor, Department of Applied Sciences and Chemical Engineering, Tribhuvan University, NEPAL

MB 210, Smart Classroom,  
Dr. MGR Block

Topic – *Electrospun composite membrane in water purification*

09<sup>30</sup> - 09<sup>50</sup>

***Keynote Talk XIII – Prof. Jakub Drewnowski***

Professor, Gdansk University of Technology, POLAND

MB 210, Smart Classroom,  
Dr. MGR Block

Topic - *The Advanced WasteWater Treatment Technology–Challenges and Current Trends in Achieving Energy Neutrality*

10<sup>00</sup> - 10<sup>20</sup>

***Keynote Talk XV – Ir. Ts. Sakthiaswaran Kaliappan***

Federal Government of Malaysia, MALAYSIA

Topic - *Root Cause Analysis for the Treated Water Pump Motor Failure in Beaufort Water Treatment Plant*

10<sup>30</sup> - 10<sup>50</sup>

H<sub>2</sub>O Time – Chai pe Charcha

Dr. MGR Block Lawn

11<sup>00</sup> - 13<sup>00</sup>

Technical Session VII- Sanitation and Urban Design  
Chairs : Prof. Satinder Kaur Brar; Prof. Boelo Schuur

Rajaji Hall,  
Dr. MGR Block

11<sup>00</sup> - 13<sup>00</sup>

Technical Session VIII – Socio Economic Initiative  
Chairs : Prof. Jennifer Tamayo; Prof. Shishir Kumar Behera

MB 210, Smart Classroom,  
Dr. MGR Block

11<sup>00</sup> - 13<sup>00</sup>

Technical Session IX - Separation Technologies  
Chairs : Prof. GP Rangaiah; Prof. Pugazhenthii

Library Conference Hall  
Central Library

13<sup>00</sup> - 14<sup>00</sup>

Luncheon

GREENOS

14<sup>00</sup> - 15<sup>30</sup>

Technical Session X - Smart Sensing Technologies  
Chairs : Prof. Hem Raj Pant; Prof. Jakub Drewnowski

Rajaji Hall,  
Dr. MGR Block

14<sup>00</sup> - 15<sup>30</sup>

Technical Session XI - Separation Technologies  
Chairs : Dr. Juri B; Prof. Amit Mahendrakar

MB 210, Smart Classroom,  
Dr. MGR Block

15<sup>30</sup> - 16<sup>00</sup>

Brew & Connect

Dr. MGR Block Lawn

16<sup>00</sup> - 16<sup>30</sup>

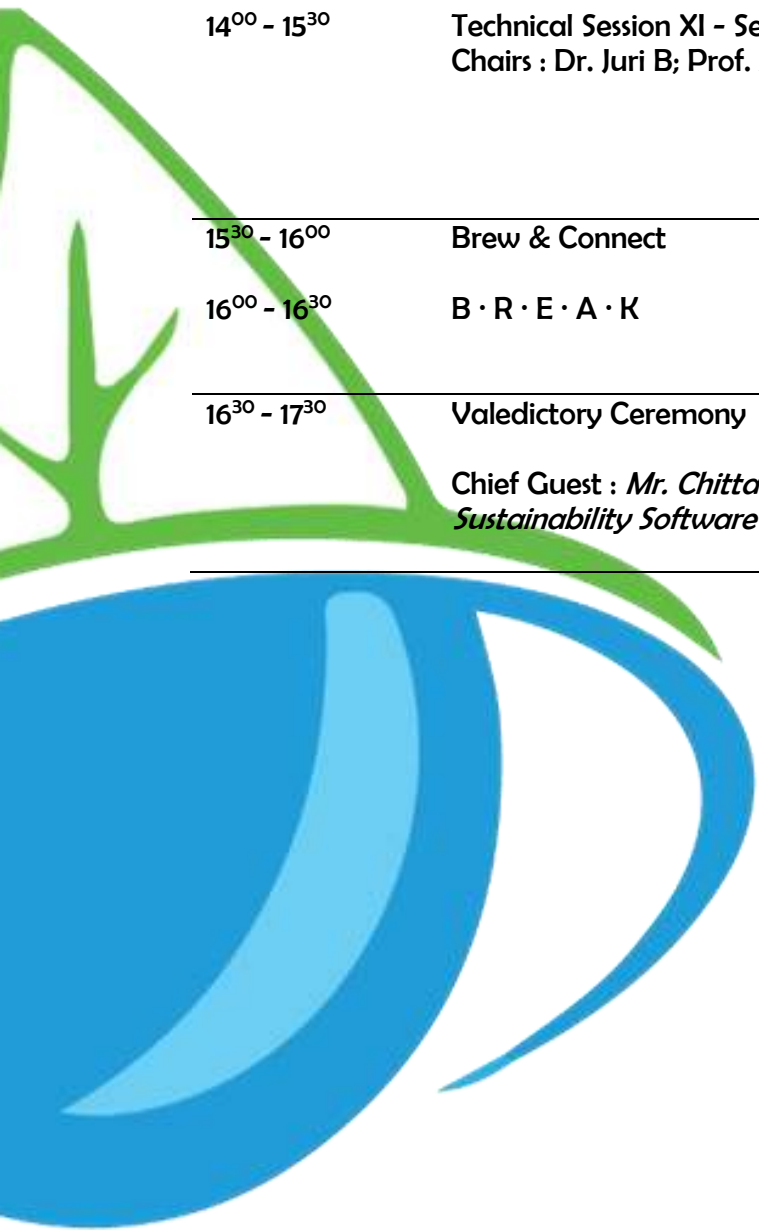
B · R · E · A · K

16<sup>30</sup> - 17<sup>30</sup>

Valedictory Ceremony

Rajaji Hall,  
Dr. MGR Block

Chief Guest : *Mr. Chittaranjan Meher, Country Leader,  
Sustainability Software BU, IBM INDIA*



# TECHNOSCAPE '23

## SESSION SCHEDULE

D A Y - II (Friday 15 Dec 2023)

*TECHNICAL SESSION I - SOCIO ECONOMIC INITIATIVE (11<sup>00</sup> - 13<sup>00</sup> IST)*

*Session Chairs : Prof. GP Rangaiah & Prof. Hiromitsu Takaba*

No	Time	Title	Authors	Affiliation	TS Manuscript ID
1	11 <sup>00</sup> -11 <sup>15</sup>	Aerated-Electrocoagulation for treatment of stabilized landfill leachate water by using Iron Electrodes	Bibin K S; Anantha S	National Institute of Technology, Calicut, INDIA	TSSEI101
2	11 <sup>15</sup> -11 <sup>28</sup>	Biodegradation of Plasticizer Diethyl phthalate (DEP): metabolomics analysis and its impact on survival of C. Elegans	Velmurugan A; Appaiyan P; Sourav N; Nagamalai S; Balasubramaniam A; Perumal V; Innasi Muthu G M	Madurai Kamaraj University, Madurai, INDIA	TSSEI102
3	11 <sup>30</sup> -11 <sup>43</sup>	Combined Hydrodynamic Cavitation with Advanced oxidation process for the degradation of crystal violet dye	Anusree P C; Anantha S	National Institute of Technology, Calicut, INDIA	TSSEI103
4	11 <sup>45</sup> -11 <sup>58</sup>	Electro-oxidation of amoxicillin antibiotic in synthetic wastewater: Operational parameters Optimization and degradation mechanism	Bhavana K; Mitil M. Koli; Swatantra P. Singh	Indian Institute of Technology, Bombay, INDIA	TSSEI104
5	12 <sup>00</sup> -12 <sup>13</sup>	Laser-induced Graphene-based Electrochemical Sensor for Toxic 4-Nitrophenol Pollutant in Wastewater	Vikram P W; Siddhartha P. D; Swatantra P. Singh	Indian Institute of Technology, Bombay, INDIA	TSSEI105
6	12 <sup>15</sup> -12 <sup>28</sup>	Biochar emanate from the crown of Ananas Comosus and Sweet lime fibres: Efficient adsorption of nitroaromatic compounds	Neha G; Deepmoni D; Gopal D	Indian Institute of Technology, Guwahati, INDIA	TSSEI109
7	12 <sup>30</sup> -12 <sup>43</sup>	Modified electrochemical peroxidation for the treatment of stabilized landfill leachate by using stainless steel and iron electrode	Saji Simon C	National Institute of Technology, Calicut, INDIA	TSSEI110
8	12 <sup>45</sup> -12 <sup>58</sup>	Unlocking the adsorption potential of pyrolysis Char derived from waste sources	Yashasvi T	Manipal University, Jaipur, INDIA	TSSEI111



# TECHNOSCAPE '23

## SESSION SCHEDULE

DAY - II (Friday 15 Dec 2023)

*TECHNICAL SESSION II – SMART SENSING TECHNOLOGIES (1<sup>00</sup> - 13<sup>00</sup> IST)*

*Session Chairs : Prof. Tsuji Tomoya & Prof. Taro Arakawa*

No	Time	Title	Authors	Affiliation	TS Manuscript ID
9	11 <sup>00</sup> –11 <sup>13</sup>	Phytofabrication of Cu <sub>2</sub> O/TiO <sub>2</sub> nanocomposite by a method of simultaneous addition of precursors for photocatalytic degradation of Antibiotics -A sustainable solution for water	Preethi S; Vidya S K	National Institute of Technology Surathkal, INDIA	TSPWT201
10	11 <sup>15</sup> –11 <sup>28</sup>	Fluoride removal and photodegradation of micropollutants using 3D-metal-organic- framework: A sustainable way to achieve SDG:6	Arnab M; Debasis D	Sidho-Kanho-Birsha University, Purulia, INDIA	TSPWT202
11	11 <sup>30</sup> –11 <sup>43</sup>	Treatment of Organic Dye by the Activation of Oxidizing agent Using Metal Oxide Nanoparticle	Fetcia J C; Ponnusamy S K	SSN College of Engineering, Chennai, INDIA	TSPWT203
12	11 <sup>45</sup> –11 <sup>58</sup>	Solar and Joule Heating Antifouling Surface for Desalination and Brine Treatment	Aiswarya C L; Swatantra P S	Indian Institute of Technology, Bombay, INDIA	TSPWT206
13	12 <sup>00</sup> –12 <sup>13</sup>	Electro-oxidation of Esomeprazole using carbon coated Titanium (C/Ti): optimization And identification of degradation pathway	Salman F; Harikrishnan P; Gopi U; Ajith G; Anbazhagi M; Muthukumar M	Central University of Kerala, Periyar, INDIA	TSPWT207
14	12 <sup>15</sup> –12 <sup>28</sup>	Electrochemical Inactivation of Enteric Viruses using Doped Laser-Induced Graphene Filters	Akhila M. Nair; Najmul H. Barbhuiya; Swatantra P. Singha	Indian Institute of Technology, Bombay, INDIA	TSPWT211
15	12 <sup>30</sup> –12 <sup>43</sup>	Current Advances and Perspectives on MFC coupled Hybrid Technologies for Sustainable Wastewater Treatment	K. Priyadharshini; Niju S	PSG College of Technology, Coimbatore, INDIA	TSPWT215
16	12 <sup>45</sup> –12 <sup>58</sup>	Valorisation of various sources of food waste for polyhydroxy alkanates (PHA) production Using Candida tropicalis	Jyothiramyee J P, Kannabiran R	Vellore Institute of Technology, Vellore, INDIA	TSCER712

# TECHNOSCAPE '23

## SESSION SCHEDULE

D A Y - II (Friday 15 Dec 2023)

*TECHNICAL SESSION III – CIRCULAR ECONOMY & RESOURCE RECOVERY (11<sup>00</sup> - 13<sup>00</sup> IST)*

*Session Chairs : Prof. Hideaki Yoshitake & Prof. Matsuda Hiroyuki*

No	Time	Title	Authors	Affiliation	TS Manuscript ID
17	11 <sup>00</sup> -11 <sup>13</sup>	Eco-friendly Biodegradable Electrospun Fibrous System for Methylene Blue Dye Removal Using Polylactic Acid	Alsha S; Minoo N; Xungai W; Balasubramanian K	Deakin University, AUSTRALIA	TSSET303
18	11 <sup>15</sup> – 11 <sup>28</sup>	Remediation of chromium ions from wastewater using pyrolytic char doped ceramic membrane	Zinnia C; Aparna R S; Sanjib B; Dwaipayan S	University of Calcutta, Kolkata, INDIA	TSSET304
19	11 <sup>30</sup> – 11 <sup>43</sup>	Green Synthesis of Carbon Quantum Dots from Teak Leaves Biomass for In-situ Precipitation and Regenerative-Removal of Methylene Blue-Dye	Z. W Basha; S. Muniraj; Annamalai S K	Ramakrishna Mission Vivekananda College, Chennai, INDIA	TSSET305
20	11 <sup>45</sup> -11 <sup>58</sup>	Experimental analysis of a novel cogeneration system for power and desalination	Rajesh S	Vellore Institute of Technology, Vellore, INDIA	TSSET306
21	12 <sup>00</sup> -12 <sup>13</sup>	Reuse and valorization of coal fly ash and bottom Fly ash waste by Transformation into ceramic membranes <i>via</i> stereolithography Technique	Mithilesh P; Shiao-Shing C; Jia-Chang Wang; Bhanupriya D; Thi Xuan Q N	National Taipei University of Technology, TAIWAN	TSSET308
22	12 <sup>15</sup> -12 <sup>28</sup>	Silk Adsorbent for Green and Efficient Removal of Methylene Blue from Wastewater	Shruti G; Balasubramanian K	Defence Institute of Advanced Technology, INDIA	TSSET309
23	12 <sup>30</sup> -12 <sup>43</sup>	Photocatalytic degradation of congo-red dye from wastewater using an Agricultural bio-waste derived Carbon nanorod Nanocomposite	Arasi R; Balaji D	SSN College of Engineering, Chennai, INDIA	TSSET310
24	12 <sup>45</sup> -12 <sup>58</sup>	Sophia: Sustainable Off-Grid Technologies for Drinking and Deionised Water for Hospitals in Africa	Jan H; Sneha D; Duc N. Dinh	Karlsruhe University of Applied Sciences, GERMANY	TSSET302

# TECHNOSCAPE '23

## SESSION SCHEDULE

DAY - II (Friday 15 Dec 2023)

*TECHNICAL SESSION IV - PROCESSED WATER TECHNOLOGIES (14<sup>30</sup> - 16<sup>30</sup> IST)*

*Session Chairs : Prof. Tochigi Katsumi & Dr. D. Sivakumar*

No	Time	Title	Authors	Affiliation	TS Manuscript ID
25	14 <sup>30</sup> -14 <sup>43</sup>	Remediation of textile industrial wastewater using integrated- Electrocoagulation and Adsorption Process: an eco- Friendly approach	Durgadevi S; M. Arivazhagan	National Institute of Technology Tiruchirappalli, INDIA	TSSET313
26	14 <sup>45</sup> -14 <sup>58</sup>	Sustainable Water Reclamation using Electrochemical Deionization with Crosslinked Bio composite Electrodes for Mitigating Chromium Contamination	Vigneshwaran G; Abirami G N; Charulatha G; Meera S B K M	National Institute of Technology Tiruchirappalli, INDIA	TSSET315
27	15 <sup>00</sup> -15 <sup>13</sup>	Groundwater quality assessment by machine learning models: a comprehensive study for industrial corridors in semi-arid regions	Loganathan K; Vignesh R L	Vellore Institute of Technology, Vellore, INDIA	TSSET316
28	15 <sup>15</sup> -15 <sup>28</sup>	Effect of iron doping on nickel aluminate photocatalytic activity towards the degradation of Methylene blue under Visible and UV light	Ancy Kurian, Anju Nair, S. Sumathi	Vellore Institute of Technology, Vellore, INDIA	TSSET317
29	15 <sup>30</sup> -15 <sup>43</sup>	Preparation of Polyvinylidene fluoride membranes with Enhanced- Hydrophobicity and its Applications in Chromium recovery using Supported Liquid Membrane in Practical scale	A K Ghosh, V. S. Mamtani, S. Mukhopadhyay, A. K Adak, Rutuja S. Bhoje	Institute of Chemical Technology, Mumbai, INDIA	TSSET318
30	15 <sup>45</sup> -15 <sup>58</sup>	Biodegradation of emerging contaminants, cosmetic ingredients, butylated hydroxy anisole, and benzophenone by sp. <i>Trametes versicolor</i>	Bhautik D	Silesian University of Technology, POLAND	TSSEI515
31	16 <sup>00</sup> -16 <sup>13</sup>	Copper recovery by using modified anodes in bio-electrochemical systems	Yelitza D; Ester L; Martín M; Jakub D; Javier L; Francisco Jesús F M	Gdansk University of Technology, ul. Narutowicza 11/12, 80-233 Gdansk, POLAND	TSPWT616
32	16 <sup>15</sup> -16 <sup>28</sup>	Recovery of Nutrients from Human Urine through Precipitation and Dehydration	Bidisha M; Ganpati S N; Ramchandra P; Mahesh G	Vellore Institute of Technology, Vellore, INDIA	TSSET319

# TECHNOSCAPE '23

## SESSION SCHEDULE

DAY - II (Friday 15 Dec 2023)

### TECHNICAL SESSION V - SANITATION & URBAN DESIGN (14<sup>30</sup> - 16<sup>30</sup> IST)

Session Chairs : Ms. Marcella D'Souza & Dr. Pundlik Bhagat

No	Time	Title	Authors	Affiliation	TS Manuscript ID
33	14 <sup>30</sup> -14 <sup>43</sup>	Revitalisation of Vallimalai village watershed through integrated approach of WSUD treatments, Indigenous water knowledge systems and smart technologies	Kumareswari R	Vellore Institute of Technology, Vellore, INDIA	TSSUD402
34	14 <sup>45</sup> -14 <sup>58</sup>	Enhancing Food Security in Semi-Arid Region by Sustainably Improving Agricultural Water Productivity through Group Micro Irrigation (GMI)	Arun D B	Watershed Organization Trust, INDIA	TSSUD403
35	15 <sup>00</sup> -15 <sup>13</sup>	A study on the characterisation of water quality for an urban wetland, Doddanekkundi at Bengaluru:	Niranjan H; Mahasweta L	Manipal Institute of Technology (MIT), Manipal, INDIA	TSSUD406
36	15 <sup>15</sup> -15 <sup>28</sup>	Toilet functionality and cleanliness status in Healthcare Facilities (HCF) in Dhaka Bangladesh	Nuhu A; Tim F; Juliet W	International Centre for Diarrhoeal Disease Research, Dhaka, BANGLADESH	TSSUD409
37	15 <sup>30</sup> -15 <sup>43</sup>	From Rainwater Harvesting to Groundwater Exploitation: Understanding the Changing Dynamics of Farm Pond and their Socio-economic Consequences in a Semi-Arid Region of Maharashtra, India	Md Taufique W	Watershed Organization Trust, INDIA.	TSSUD412
38	15 <sup>45</sup> -15 <sup>58</sup>	Time Series Analysis of Groundwater Quality Parameters of Tiruchirappalli District in Tamil Nadu	Naga Lakshmi Y	Indian Institute of Technology, Kharagpur, INDIA	TSSUD415
39	16 <sup>00</sup> -16 <sup>13</sup>	Pharmaceutical Industry Wastewater Treatment using Advanced Oxidation Process And Hydrodynamic Cavitation	Vinay B; Divya D; Narendra B; Sanjay P. K	CSIR- NCL Pune, INDIA	TSPWT609
40	16 <sup>15</sup> -16 <sup>28</sup>	Enhancing Agricultural Productivity of Chickpeas using Low-Grade Rock Phosphate enriched Human Urine	Ishita S; Divya S; Aman S; Mahesh G	Vellore Institute of Technology, Vellore, INDIA	TSSEI514

# TECHNOSCAPE '23

## SESSION SCHEDULE

DAY - II (Friday 15 Dec 2023)

### TECHNICAL SESSION VI : PROCESSED WATER TECHNOLOGIES (14<sup>30</sup> – 16<sup>30</sup> IST)

Session Chairs : Prof Kazuho Nakamura & Mr. Manikandan Vasudevan

No	Time	Title	Authors	Affiliation	TS Manuscript ID
41	14 <sup>30</sup> -14 <sup>43</sup>	Investigation of bivo4-related Photo(electro)catalytic system for detection and decomposition of water contaminants	Sridharan B; Thomas C.-K. Y	National Taipei University of Technology, TAIWAN	TSPWT603
42	14 <sup>45</sup> -14 <sup>58</sup>	Modelling & Simulation for Sustainable Recovery of Glycols & Aromatics from Petrochemical Industrial Wastewater	B G Prakash K; Jigyasha S; Murchana C; Souvik K P	BITS, Pilani Dubai Campus, DUBAI	TSPWT604
43	15 <sup>00</sup> -15 <sup>13</sup>	Influence of Sodium Chloride Concentration on the Performance of Microbial Desalination Cells using Sago Effluent as Anolyte	Sandhya P; Samsudeen N M; Kalaichelvi P	National Institute of Technology, Tiruchirappalli, INDIA	TSPWT605
44	15 <sup>15</sup> -15 <sup>28</sup>	Bacteriophage as a Bio-disinfectant: Utility of a cocktail of bacteriophages in wastewater treatment	Vinodkumar C.S; Ananya V. S; Shreshta S; Veni Emilda J. K; Pradeep A. N	S.S. Institute of Medical Sciences and Research Centre, Karnataka, INDIA	TSPWT611
45	15 <sup>30</sup> -15 <sup>43</sup>	Industrial Application of Zero Liquid Discharge in Wastewater Treatment	Bandaru K; Divya S; Sagnik M; Jayyant K; Samarshi C	Vellore Institute of Technology, Vellore, INDIA	TSPWT614
46	15 <sup>45</sup> -15 <sup>58</sup>	PA Prodotto WFW – a supplement process chemical from the sustainable initiative to Ensure Zero Discharge in the SF-FL process Tanning Industry	Nagarajan V; Anbumalar C; V Ramalingam; E Velmurugan	M/S. P A Footwear Ltd, Sipcot Industrial Estate, Ranipet, INDIA	TSPWT615
47	16 <sup>00</sup> -16 <sup>13</sup>	Design of an Affordable Intelligent Hydroponics System for Micro Farming with IoT Integration	Visweshwar S; Sanjit F; Arvind T	Vellore Institute of Technology, Vellore, INDIA	TSSST820
48	16 <sup>15</sup> -16 <sup>28</sup>	An Experimental Study probing moisture kinetics and indices of microwave dried faecal sludge with an insight on real world applications	Jayyant K; Priyanka S; Trisha D; Mahesh G	Vellore Institute of Technology, Vellore, INDIA	TSSUD416

# TECHNOSCAPE '23

## PROGRAMME SCHEDULE

D A Y - III (Saturday 16 Dec 2023)

### TECHNICAL SESSION VII - SANITATION & URBAN DESIGN (1<sup>00</sup> - 13<sup>00</sup> IST)

Session Chairs : Prof. Satinder Kaur Brar & Prof. Boelo Schuur

No	Time	Title	Authors	Affiliation	TS Manuscript ID
49	11 <sup>00</sup> -11 <sup>13</sup>	Bacterial Biosurfactants in Oil Mediation and Oil Recovery in Marine Environments	Gayathri H; Ponnusamy S K, Sreenidhi Y	Vellore Institute of Technology, Vellore, INDIA	TSCER701
50	11 <sup>15</sup> -11 <sup>28</sup>	A new thermophilic anaerobic bioreactor system integrated to membrane distillation and thermoelectric generator for enhanced methane generation, wastewater treatment and power generation	Bhanupriya D; Yu-An Wu; Shiao-Shing C	National Taipei University of Technology, TAIWAN	TSCER704
51	11 <sup>30</sup> -11 <sup>43</sup>	Remediation of TNT Red Water using Graphene Nanocomposites Synthesised from Solid Waste: An Example of Circular Economy	Anshika Y; Md. Osim A; Reddihota K	CSIR-National Environmental Engineering Research Institute, Nagpur, INDIA	TSCER706
52	11 <sup>45</sup> -11 <sup>58</sup>	Microbes to the rescue: How microorganisms are helping to reduce our carbon footprint	Parvatha R K; K. Hemalatha	Saveetha Institute of Medical and Technical Sciences, Chennai, INDIA	TSCER709
53	12 <sup>00</sup> -12 <sup>13</sup>	Enhanced Energy Recovery from Food Waste By Micronutrient Supplementation	Tintu Mary C; Swarnalatha K	College of Engineering, Trivandrum, INDIA	TSCER711
54	12 <sup>15</sup> -12 <sup>28</sup>	CLRI Technology Transforms Tannery Chrome Shaving Waste into Valuable Leather Chemicals with Zero Waste	Anbumalar C; Sathya R; R R Ramesh; Aravindhan R	P A Footwear P Ltd, Ranipet; CLRI, Chennai, INDIA	TSCER716
55	12 <sup>30</sup> -12 <sup>43</sup>	In-situ Fabrication of Titanium Suboxide-Laser Induced Graphene Composites with Enhanced Electrochemical Activity for Environmental Remediation	Ashish K; N. H. Bharbhuiya; S. P. Singh	Indian Institute of Technology, Bombay, INDIA	TSCER717
56	12 <sup>45</sup> -12 <sup>58</sup>	Studies on transformations of monocyclic aromatic hydrocarbons in municipal wastewater treatment plants	Jacek C	Lublin University of Technology, POLAND	TSCER703

# TECHNOSCAPE '23

## SESSION SCHEDULE

D A Y - III (Saturday 16 Dec 2023)

### TECHNICAL SESSION VIII - SOCIO ECONOMIC INITIATIVE (11<sup>00</sup> - 13<sup>00</sup> IST)

Session Chairs : Prof. Jennifer Tamayo & Prof. Shishir Kumar Behera

No	Time	Title	Authors	Affiliation	TS Manuscript ID
57	11 <sup>00</sup> -11 <sup>15</sup>	Strategies to achieve efficient water management in a Water intensive luxury hotel	Amalan S K S; Ambika K; Sangeetha D	National Institute of Technology, Tiruchirappalli, INDIA	TSSST801
58	11 <sup>15</sup> -11 <sup>28</sup>	Harnessing Aeroponic Farming For Water Management in Building Integrated Agriculture	Sarmathi B; Amalan S K S; Prakalya S K	National Institute of Technology, Tiruchirappalli, INDIA	TSSST804
59	11 <sup>30</sup> - 11 <sup>43</sup>	From Tradition to Innovation: iot- Enabled Precision Farming Strategies for Optimal Resource Use efficiency in Tomato Crop Management	Mahesh S; Nirmal K; Naveen LS; Varun P	Digite Infotech Private Limited, Bangalore, INDIA	TSSST805
60	11 <sup>45</sup> -11 <sup>58</sup>	Concentration - effect analysis of lignin for improved thermo mechanical properties of composite biomaterials	Manonmani S; Anitha Devi S; Anitha P L; Muthukumar K; Arunagiri A	National Institute of Technology, Tiruchirappalli, INDIA	TSSST810
61	12 <sup>00</sup> -12 <sup>13</sup>	Oxidation of Aqueous Toluene by Pulsed Corona Discharge Followed by Photocatalytic Treatment of Air Exhaust	Juri B; Marina K; Sergei P	Tallin University of Technology, ESTONIA	TSSST812
62	12 <sup>15</sup> -12 <sup>28</sup>	Optical sensor for azithromycin detection in water samples	Noha H; Rama P Pouya R; Satinder K B	Lassonde School of Engineering, York University, North York, Toronto, CANADA	TSSST814
63	12 <sup>30</sup> -12 <sup>43</sup>	Utilising Nature's Power for Sustainable Water Treatment through Phytoremediation	Nikita R; Tushar R L	National Institute of Technology, Srinagar, INDIA	TSSST815
64	12 <sup>45</sup> -12 <sup>58</sup>	Bioprospecting selective algal-bacterial co-culture for the treatment of textile dyes	Gautam V; G.N. Nikhil	National Institute of Technology, Jalandhar Punjab, INDIA	TSSST817

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## SESSION SCHEDULE

D A Y - III (Saturday 16 Dec 2023)

### TECHNICAL SESSION IX - SEPARATION TECHNOLOGIES (11<sup>00</sup> - 13<sup>00</sup> IST)

Session Chairs : Prof. GP Rangaiah & Prof. Pugazhenthii

No	Time	Title	Authors	Affiliation	TS Manuscript ID
65	11 <sup>00</sup> – 11 <sup>13</sup>	Dyglycolamic Acid coated TiO <sub>2</sub> Microspheres For Efficient Extraction of Uranium (VI) from Aqueous Solutions	N Priyadarshini; S. Priya; P. Ilaiyaraja	Sri Sivasubramaniya Nadar College of Engineering, Kalavakkam, INDIA	TSSEI507
66	11 <sup>15</sup> – 11 <sup>28</sup>	Groundwater Quality Assessment using Multivariate Statistics and Diverse Water Quality Indices in Selected Areas of the Palar River Belt, India	V Sai Sarawathi; Sakshi D; A. Kumaraguru	Vellore Institute of Technology, Vellore, INDIA	TSSEI508
67	11 <sup>30</sup> – 11 <sup>43</sup>	Response surface methodology to optimize the treatment of domestic Wastewater using a plant-based coagulant	Sahashransu S M; A. S. Vishwanathan	Sri Sathya Sai Institute of Higher Learning, Anantapur, INDIA	TSSEI510
68	11 <sup>45</sup> -11 <sup>58</sup>	Occurrences of selected non-steroidal anti-inflammatory drugs and parabens in three west-flowing South Indian rivers	Jayakrishna S; Yerabham P; Arun I; Babu R R; Nishitha D'Souza; Santhosh P; Chris P; Keshava B; Anish K W	Manipal Institute of Technology, Aapavani Environmental Solutions, Mangalore, INDIA	TSSEI512
69	12 <sup>00</sup> -12 <sup>13</sup>	Multi-Strategic approaches to Biomedical Wastewater Treatment amidst Covid-19 Pandemic	Meenaloshini G., Hemalatha K	Saveetha College of Pharmacy, Vellore, INDIA	TSSEI513
70	12 <sup>15</sup> -12 <sup>28</sup>	Simplifying analysis and treatment at the domestic wastewater treatment plant in Prasanthi Nilayam, Andhra Pradesh	A.S. Vishwanathan; Sahashransu S M	Sri Sathya Sai Institute of Higher Learning, Anantapur, INDIA	TSSEI113
71	12 <sup>30</sup> -12 <sup>43</sup>	Assessment of acute and multigenerational toxicity of 1,3-Diphenylguanidine (DPG) on Freshwater Water Fleas: Reproductive, Developmental, and Oxidative stress effects	Suman TY	Changwon National University, SOUTH KOREA	TSSEI116
72	12 <sup>45</sup> -12 <sup>58</sup>	Enhancement of UF PES Membrane Surface by Spray Coating Novel Low-Fouling Polymerisable Bicontinuous Microemulsion Layer for MBR Application	Sneha D	Karlsruhe University of Applied Sciences, GERMANY	TSSUD411



# TECHNOSCAPE '23

## SESSION SCHEDULE

D A Y - III (Saturday 16 Dec 2023)

*TECHNICAL SESSION X - SMART SENSING TECHNOLOGIES (14<sup>00</sup> - 15<sup>30</sup> IST)*

*Session Chairs : Prof. Hem Raj Pant & Prof. Jakub Drewnowski*

No	Time	Title	Authors	Affiliation	TS Manuscript ID
73	14 <sup>00</sup> -14 <sup>13</sup>	Adsorption Behaviour of Ciprofloxacin and Amoxicillin on Polyamide and Polystyrene Microplastics in Aqueous Solutions	Sheetal K	Indian Institute of Technology, Bombay, INDIA	TSSEI501
74	14 <sup>15</sup> -14 <sup>28</sup>	Microbial Degradation of Textile Effluents Using Biosorption and Resources Recovery for Agricultural Application	Sakthi Shabarish K; Kannabiran K	Vellore Institute of Technology, Vellore, INDIA	TSSEI504
75	14 <sup>30</sup> -14 <sup>43</sup>	Upgrading tetracycline degradation and pharmaceutical wastewater treatment with hydrochar derived cathode catalyst: A synergy of Fenton-like and bio- Electrochemical systems	Shraddha Yadav, Monali Priyadarshani, Azhan Ahmad, M. M. Ghangrekar, Brajeshm K. Dubey, Chikirsha Gulati	Indian Institute of Technology, Kharagpur, INDIA	TSSEI509
76	14 <sup>45</sup> -14 <sup>58</sup>	Evaluation of Water Quality based on Multivariate Statistics and Water Quality Index (WQI) of Noyyal River Water in Erode District, Tamil Nadu, India	V. Aravindhaa; K. Thrisha, G. Shanthini; V. Sai Saraswathi	Vellore Institute of Technology, Vellore, INDIA	TSSEI511
77	15 <sup>00</sup> -15 <sup>13</sup>	Assessment of Soil Loss Using Geospatial Techniques for Soil and Water Conservation Plans in the Godavari and Krishna Sub-Basins	Tina S; Vijay S	WOTR Centre of Resilience Studies, INDIA	TSSST813
78	15 <sup>15</sup> -15 <sup>28</sup>	Seaweed biomass of algae <i>Hypnea Valentiae</i> (Turner) Montagne Montagne, 1841 ameliorates the biosorption of $cd^{2+}$ , $Pb^{2+}$ and $Zn^{+}$ from aqueous solution	Raja Priya R; Samantha S K	Vellore Institute of Technology, Vellore, INDIA	TSSST816

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## SESSION SCHEDULE

D A Y - III (Saturday 16 Dec 2023)

### TECHNICAL SESSION XI - SEPARATION TECHNOLOGIES (14<sup>00</sup> - 15<sup>45</sup> IST)

Session Chairs : Dr. Juri B & Prof. Amit Mahendrakar

No	Time	Title	Authors	Affiliation	TS Manuscript ID
79	14 <sup>00</sup> -14 <sup>13</sup>	Shifting Water Governance Regimes in Tamilnadu: Lessons from the historic city of Madurai	Ranjitha G A; Rajeswari R; Anitha S	Christ University, Bangalore, INDIA	TSSEI112
80	14 <sup>15</sup> -14 <sup>28</sup>	Natural nicotine extraction, determination from tobacco leaves, and its microbial biodegradation through sp. <i>Trametes versicolor</i>	Bhautik D; Ewa L M; Anna K	Silesian University of Technology, POLAND	TSSEI115
81	14 <sup>30</sup> -14 <sup>43</sup>	Alcohol based draw solution minimizes the reverse solute flux in forward osmosis desalination: A numerical study	Kaushik D; D. Dsilva W R	Vellore Institute of Technology, Vellore, INDIA	TSSET307
82	14 <sup>45</sup> -14 <sup>58</sup>	Separation of Oil- Water Emulsion Using Fly Ash-Based Tubular Ceramic Membrane	G.Pugazhenth; Nishan C; Sachinkumar P Punit P	Indian Institute of Technology, Guwahati, INDIA	TSSET314
83	15 <sup>00</sup> -15 <sup>13</sup>	Solar Powered Membrane Bioreactors – A Promising Technology for Water Reuse in East Africa	Sneha D	Karlsruhe University of Applied Sciences, GERMANY	TSSUD401
84	15 <sup>15</sup> -15 <sup>28</sup>	Design of an Affordable Intelligent Hydroponics System for Micro Farming with IoT Integration	Visweshwar S; Arvind T; Sanjit F; Kinattapurayil K; Washima T	Vellore Institute of Technology, Vellore, INDIA	TSSST821
85	15 <sup>30</sup> -15 <sup>43</sup>	Nutrient Recovery and Recycling from Human Urine: A Circular Perspective on Sanitation and Food Security	Prajwal P P.B; Anjali S; Mahesh G	Vellore Institute of Technology, Vellore, INDIA	TSCER715