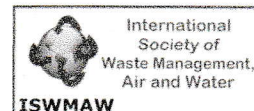


# National Symposium on Sustainable Waste Management (SWM 2019)

03<sup>rd</sup> August 2019 (Saturday)

Organized by  
Department of Energy, Tezpur University,  
Under the aegis of



International Society of Waste Management, Air and Water (ISWMAW)  
Consortium of Researchers in International Collaboration (CRIC)

Department of Energy, Tezpur University will host the National Symposium on Sustainable Waste Management (SWM 2019) that will provide a forum for sharing knowledge among researchers and practitioners offering deeper insight into the field of solid & liquid waste management including industrial waste, municipal solid waste, e-waste & plastics wastes, waste water and sludge treatment. SWMCE 2019 brings together and supports the enthusiastic researchers in carrying their work forward for environmental sustainability. Solid waste management, sanitation and resources conservation are fundamental goals of the United Nations, articulated in SDG Sustainable waste management which has direct bearing on the quality of life for all, but more especially communities in cities. NSSWM-2019 has been designated as the official pre-event of the biggest and most popular conference 9<sup>th</sup> International Conference on Sustainable Waste Management towards Circular Economy (9<sup>th</sup> IconSWM – CE 2019) scheduled during November 27 – 30<sup>th</sup>, 2019 by ISWMAW, at KIIT, Bhubaneswar, Odisha. SWM-2019 will deliberate on various issues related to innovation and implementation in waste management including policies & strategies, segregation, collection, transportation, biological and thermal and mechanical treatment technologies, LCA, climate change, circular economy, research, business opportunities etc. Over 100 delegates from different states are expected to participate in the symposium which shall also be followed by a networking meeting among the participants and researchers for brainstorming, discussions for future collaborations and manuscript communication, during the event.

**Interested participants are requested to register for the workshop and submit a brief abstract (150 words) by 20.07.19 followed by the extended abstract (1500 words), upon selection, within by 25.07.2019.**

## HOW TO PARTICIPATE?

- Submission of the brief abstracts through email ([swmtu2019@gmail.com](mailto:swmtu2019@gmail.com)) by 20.07.2019
- Acceptance of abstract will be communicated by 22<sup>nd</sup> July, 2019.
- Registration for the workshop shall be done upon payment of the requisite fee by 24.07.2019
- Submission of the extended abstract (upto 1500 words) through email ([swmtu2019@gmail.com](mailto:swmtu2019@gmail.com)) by 25<sup>th</sup> July, 2019.

### Abstracts are invited on any following themes associated with Sustainable Waste Management:

- Solid Waste : Management, Treatment & Rules
- Industrial Wastes, Hazardous Waste, Plastics Waste, C&D Waste, Bio-medical, E-Waste
- Materials Development by Recycling
- Policy, Legal, Economic, Cooperation, Governance, Circular Economy, 3Rs and Circular Economy
- Climate change & Low Carbonvis-a-vis sustainable WM,
- Swachh Bharat Mission and Cleanliness movement, SBM Implementation, Modernization of toilets, Swachh City Survey.
- Agriculture and Agro Industry Waste Management
- Mission Nirmal Bangla– Strategies and Implementation
- Waste Water treatment & Recycling.
- Fecal Sludge Management.
- Nano Technology applied to Waste Treatment
- Best Practices, PPP Models, Community Participation
- Disaster Waste Management
- Energy Recovery technologies: WTE, Bio-methanation, Plasma, Biological, Chemical & Biochemical Treatment, Biofuels and Bio energy production, Biomass supply chain.
- Waste Management in smart cities; Waste Management in Real Estate, High Rise Building & Housing Complex.
- Kitchen Waste and Garden Waste. Landfills (& leachate), Composting, Recycling, Special Processes.

### Incentives for the authors / participants:

- ✦ Awards for Three Best Papers
- ✦ All presented papers will be published as an abstract book by CRI Publishing with ISBN number
- ✦ Participation certificates for all registered participants
- ✦ All submitted and accepted extended abstract will be asked for submission of full paper to the coveted 9<sup>th</sup> IconSWM-CE 2019 at Bhubaneswar in Nov 2019.
- ✦ The extended abstract will be published as proceedings books of 9<sup>th</sup> IconSWM-CE2019 and the submitted full paper will be selected for publication in books by Springer Nature and special issues of SCI Journals.
- ✦ NSSWM2019 participants (Not for UG students) will be eligible for a 20% discount on the registration fee of the 9<sup>th</sup> IconSWM-CE2019.

### **IMPORTANT GUIDELINES: Abstract submission:**

- ✦ The document should be in the Times New Roman font. Title should be in the bold, font size 14 (Bold), while Author names should be italicized, with font size 12. The affiliation details (address, email, contact number) in font size 10 and center aligned.
- ✦ Abstract with four keywords should be within 150 words while the extended abstract within 1500 words.
- ✦ The abstract file should be saved as "Last Name- First Name\_ Title of paper" in word's default file format (.docx/.doc) and mail the same to ([swmtu2019@gmail.com](mailto:swmtu2019@gmail.com)).

Department of Energy  
Tezpur University

### Extended Abstract submission guidelines:

1. The extended abstract should have following subsections: Abstract, Introduction, Materials and methods, results and discussion, conclusions and references (in APA Format). Maximum 4 pages allowed for each paper.
2. The file (extended abstract) should be saved as "Paper Id (that will be communicated while confirming the acceptance)" in MS word format (.docx/.doc) and mailed to (swmtu2019@gmail.com).

### Invited Speakers from

- ✦ Jadavpur University
- ✦ IITG
- ✦ DRDO District Administration
- ✦ NITs
- ✦ Tezpur University

### Registration Guidelines & payments:

- ✦ Each paper/poster should be presented by a registered author.
- ✦ All payments are to be done through online/upi or bank transfer or by Bank Draft in favour of "REGISTRAR, TEZPUR UNIVERSITY" to A/C No.: 10501585452; Bank: Main Branch, Tezpur, Lake Road, Tezpur, Sonitpur, Assam-784001, IFSC Code: SBIN0000195, MICR Code: 784002002

### Important Dates

Deadline for Abstract Submission: 20 July, 2019

Intimation of Accepted Abstract: 22 July, 2019

Registration & Payment Deadline: 24 July, 2019

Extended Abstract Submission: 25 July, 2019

Symposium on 3<sup>rd</sup> August, 2019 (9.30 am -5.00 pm)

### Registration Fees:

Category : Delegate Participation, Type of Organization	Fees Payable
Delegate from Industry / Govt. Dept. / PSU/ ULBs	INR 1000
Delegate from Academics/R&D organization/NGO	INR 750
Research Scholars, PG, UG Students (Supervisor/Guide must be a co-author)	INR 500

### Advertisement Tariff: Advertisement, A4 size in proceedings:

Type	Fees Payable
Full page (inside black & white)	INR 2000
Half page (inside black & white)	INR 1000
Full page (inside colour)	INR 4000
Back cover page	INR 5000
Inside back cover	INR 4000

# Limited accommodations may be made available upon request, as per actuals.

### Steering Committee

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Prof Papori Baruah, Dean, School of Management Sciences

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Prof Rupam Katak, Head, Department of Energy, TU

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Dr. Marisa Soares Borges, Federal University of Parana, Brazil

Prof. (Dr.) Debendra C Baruah, Tezpur University, India

Dr. Priyabrata Banerjee, CMERI, Durgapur, India

Prof. (Dr.) H. N. Chanakya, CST, IISc, Bangalore

Mr. U. V. Parlikar, Ex Dy. Head, Geocycle India, Mumbai

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Prof. Sanjib Moulick, Asso. Dean-FEC, KIIT, Secy. 9<sup>th</sup>IconSWM,

Bhubaneswar,

Prof. Gopinath Haldar, NIT Durgapur

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Dr Nabin Sarmah, TU

Dr P K Choudhury, TU

Dr Tapas Medhi, TU

Dr Nirmali Gogoi, TU

Dr Shalini Deka, TU

Dr Nishant Rachayya Swami Hulle, TU

Dr Rajinder Singh, TU

Mr Mohammad Asif, TU

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**Website:** <https://swmtu2019.wixsite.com/mysite>

  
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**NATIONAL SYMPOSIUM ON SUSTAINABLE WASTE MANAGEMENT (NSSWM 2019)**

09:00 am	Registration and tea (Council Hall)
	<b>Session I: Inaugural session (Council Hall)</b>
09:45 am	Welcome address by Prof D C Baruah, Co-Chairman, NSSWM
09:50 am	Inaugural address by Prof V K Jain, Vice Chancellor, Tezpur University
10:00 am	<i>Solar Energy Solutions for Sustainable Waste Water Management</i> by Prof. K. Srinivasa Reddy, IIT Madras
10:30 am	<i>Sustainable Waste Management in Cities</i> by Prof. Michèle Clarke
11:00 am	Vote of thanks
11:15 am	<b>Session II: Parallel Technical Session A (Council Hall)</b> Theme: Sustainable Waste Management
	Chair: Dr O N Tiwarii, CCUBGA, IARI New Delhi Co-Chair: Dr E Kalita, MBBT, TU Rapporteur: Ms Trinakshee Sarmah , RS, TU
11:15 am	<b>Session III: Parallel Technical Session B (Seminar Hall, Department of Energy)</b> Theme: Innovations in Waste treatment
	Chair: Prof C L Mahanta, School of Engineering Co-Chair: Dr P K Choudhury, Department of Energy, TU Rapporteur: Mr Niran Daimary, RS, TU
01:00 pm	Working lunch
02:00 pm	<b>Session IV: Parallel Technical Session C (Council Hall)</b> Theme: Recycle & Reuse
	Chair: Prof Ramesh C Deka, Dean, School of Science CoChair: Dr B Kakati, Department of Energy, TU Rapporteur: Ms Panchalee Borthakur, RS, TU
02:00 pm	<b>Session V: Parallel Technical Session D (Seminar Hall, Department of Energy)</b> Theme: Energy Recovery
	Chair: Prof Dhanapati Deka, Dean, Students Welfare, TU Co-Chair: Dr Kamal Uddin Ahamad, Department of Civil Engineering, TU Rapporteur: Mr Swagat Chutia, RS, TU
	<b>Plenary Session (Council Hall)</b>
	Chair: Prof S K Ghosh, Chairman, Chairman, IconSWM Co-Chair: Dr Nabin Sarmah, Department of Energy, TU
03:30 pm	<i>Circular Economy in the context of Waste Management</i> by Prof S K Ghosh, Chairman, Chairman, IconSWM & President, ISWMAW
03:50 pm	<i>Biodegradation technologies for Sustainable Waste Management</i> by Dr Soumya Chatterjee, Scientist E & Head, Biodegradation Technology Division, DRL, Tezpur
04:10 pm	Brainstorming and Interactions
04:40 pm	Best paper award distribution (Coordinator: Dr Nishant Swami Hulle)
04:50 pm	Concluding remarks from the Chair

  
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# REPORT ON National Symposium on Sustainable Waste Management (SWM 2019)

Department of Energy, Tezpur University successfully organised the National Symposium on Sustainable Waste Management (SWM 2019). This forum provided a platform for sharing knowledge among researchers and practitioners offering deeper insight into the field of solid & liquid waste management including industrial waste, municipal solid waste, e-waste & plastics wastes, waste water and sludge treatment. SWM 2019 brings together and supports the enthusiastic researchers in carrying their work forward for environmental sustainability. Solid waste management, sanitation and resources conservation are fundamental goals of the United Nations, articulated in SDG Sustainable waste management which has direct bearing on the quality of life for all, but more especially communities in cities.

SWM-2019 deliberated on various issues related to innovation and implementation in waste management including policies & strategies, segregation, collection, transportation, biological and thermal and mechanical treatment technologies, LCA, climate change, circular economy, research, business opportunities etc.

## **Multidisciplinary themes has been covered which were associated with Sustainable Waste Management.**

<ul style="list-style-type: none"> <li>• Solid Waste : Management, Treatment &amp; Rules</li> <li>• Industrial Wastes, Hazardous Waste, Plastics Waste, C&amp;D Waste, Bio-medical, E-Waste</li> <li>• Materials Development by Recycling</li> <li>• Policy, Legal, Economic, Cooperation, Governance, Circular Economy, 3Rs and Circular Economy</li> <li>• Climate change &amp; Low Carbonvis-a-vis sustainable WM,</li> <li>• Swacchha Bharat Mission and Cleanliness movement, SBM Implementation, Modernization of toilets, Swachha City Survey.</li> <li>• Agriculture and Agro Industry Waste Management</li> <li>• Mission Nirmal Bangla– Strategies and Implementation</li> <li>• Waste Water treatment &amp; Recycling.</li> </ul>	<ul style="list-style-type: none"> <li>• Fecal Sludge Management.</li> <li>• Nano Technology applied to Waste Treatment</li> <li>• Best Practices, PPP Models, Community Participation</li> <li>• Disaster Waste Management</li> <li>• Energy Recovery technologies: WTE, Bio-methanation, Plasma, Biological, Chemical &amp; Biochemical Treatment, Biofuels and Bio energy production, Biomass supply chain.</li> <li>• Waste Management in smart cities; Waste Management in Real Estate, High Rise Building &amp; Housing Complex.</li> <li>• Kitchen Waste and Garden Waste. Landfills (&amp; leachate), Composting, Recycling, Special Processes.</li> </ul>
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Head  
Department of Energy  
Tezpur University



1. Inaugural address by Prof. V K Jain , Vice Chancellor, Tezpur University



2. Group photo with participants



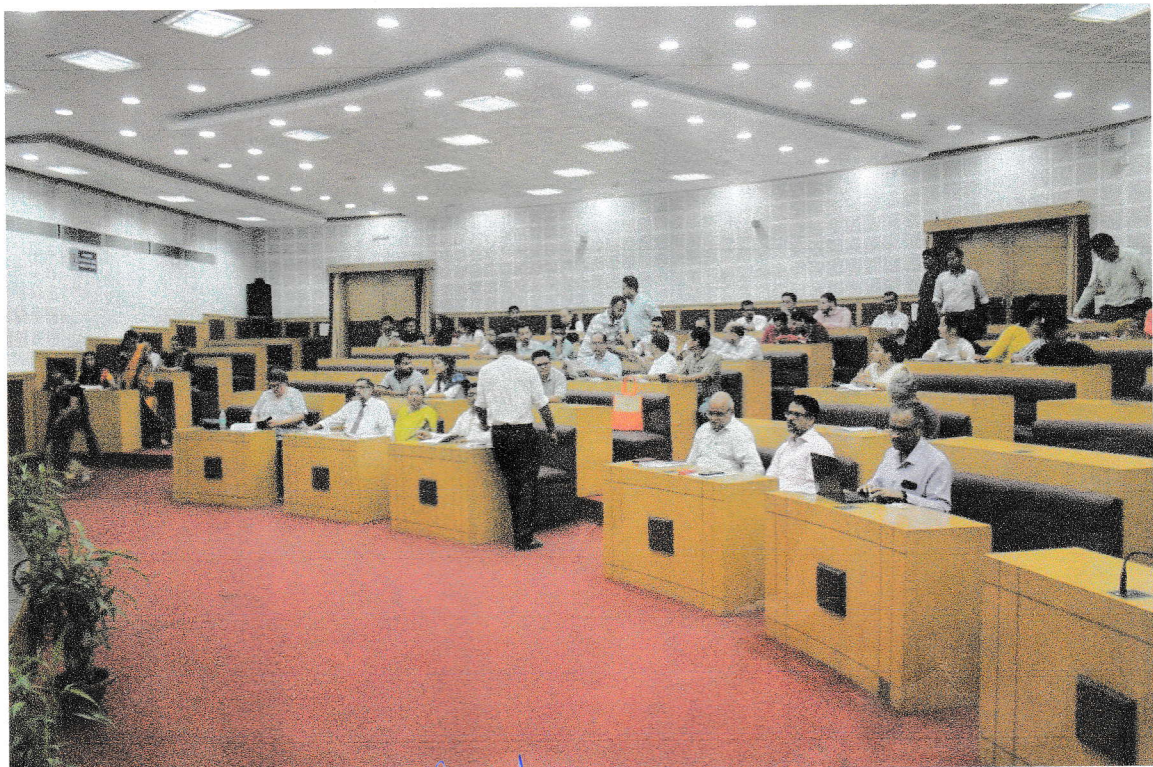
*Dileesh*  
Head  
Department of Energy  
Tezpur University

*Deep Kumar*

3. Technical Session -1



4. Technical Session - 2



*Dileen h*  
Head  
Department of Energy  
Tezpur University

*Dileen h*

Paper Id	Title	Authors
	<b>Sustainable waste Management</b>	<b>Session-2</b>
SWM2019-106	Waste Burning And Energy Poverty In Rural West Bengal: A Micro Level study	Anuradha Sarkar, Aman Ghosh, Arpita Hazra, Prof. Amit kumar Hazra
SWM2019-107	Agro waste for doubling Income of Assam	Samikhya Bhuyan, Smita Bhuyan
SWM2019-119	Awareness, Attitude and Practice of Household Waste Management among Rural Women	Runamani Baro
SWM2019-125	PROPER MANAGEMENT AND HANDLING OF HOSPITAL WASTE: THE NEED OF THE HOUR	Kathryn Rai and Rajinder Singh
SWM2019-127	Empirical investigation on Sustainable Solid Waste Management in India	Homang Chetri, Raju Sharma
SWM2019-130	Strategic Niche Management in biomass energy supply chain in North East India	Mridul Dutta
SWM2019-132	A STUDY ON SWACHH BHARAT: SWACHH VIDYALAYA AWARENESS AMONG SECONDARY SCHOOL STUDENTS	Ganji. Dhana Lakshmi,
SWM2019-137	Solid Waste Management: A Peep through the Effectiveness of Legislative Policies	Nazmin Sultana, Dr. Rajinder Singh
SWM2019-144	ECONOMIC OPENNESS AND ADVANCEMENT OF CIRCULAR ECONOMY: CORRELATION	Gayatri Gogoi
	<b>Recycle, Recover, Reuse</b>	<b>Session 4</b>
SWM2019-100	Preparation of Carbonate Rich Blackboard Chalk from Chicken Egg Shells	Abhishek Sarkar and Panchanan Puzari
SWM2019-101	Removal of Dye effluent using activated carbon prepared from Rice Bran	Reena Roy, Dr. Ava Rani Phukan and Dr. Binita B. Kalita
SWM2019-102	DEFLUORIDATION OF WASTEWATER USING HAP-COATED-LIMESTONE IN A CONTINUOUS FIXED-BED COLUMN	Rajkamal Mohan, Robin K. Dutta
SWM2019-109	Water splitting using Gold Vanadium catalyst	Biraj Das, Mukesh sarma, Kusum K. Bania
SWM2019-110	PdO/CuO-Y/C Nanocomposite for Direct Methanol Fuel Cell and Nitro-arene Reduction	Mukesh Sharma, Biraj Das, Kusum K. Bania
SWM2019-123	Chitosan: An Effective Immobilization Matrix for Microbes in Microbial Fuel Cell	Pooja Rani Kuri and Pranab Goswami
SWM2019-124	Co-Cr-HNT as an Efficient Electrocatalyst for Methanol Oxidation	Manash J. Baruah, Mukesh Sharma, Biraj Das and Kusum K. Bania*
SWM2019-128	Design and Development of a Hostel Wash Basin Waste Trap for Appropriate Food Solid Waste Management	Tarik Dutta, Prasun Kumar Roy, Prem Shankar Kumar, Partha Pratim Dutta, Bhabesh Nath, Hreeshikesh Dutta
SWM2019-129	Effect of Buffer Lime Requirement method without Hazardous Chemicals for acid soils of Upper Brahmaputra Valley Zone of Assam	Lekhika Borgohain, Danish Tamuly , K.N. Das
SWM2019-131	Investigation on the Emission Characteristics of a Diesel Engine Fueled by Neat Biodiesels	Madhurjya Saikia, Bichitra Bikash , Dilip Kumar Bora, Kalyan Kalita
SWM2019-136	Iron Oxide Impregnated rice husk derived lignocellulosic nanobiosorbents for rapid adsorption of Arsenic: Statistical optimization of batch parameters using response surface methodology	Bikash Kar Nath , Chayanika Chaliha , Eeshan Kalita
SWM2019-140	Manure production from equine wastes using novel composting practice	Sampriti Katak, Rajeev Gupta, VK Joshi, Sanjai K Dwivedi, Soumya Chatterjee

*Dheeraj*  
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*Prasun*

	Innovation in Waste management	Session 3
SWM2019-103	Waste Management and Clean Water from Aquatic Macrophytes infested Ponds in Rural Bengal: A Social Study	Sreya Ghosh, Tapas Bagdi, Prof. Amit Hazra
SWM2019-105	Prospective of organic wastes application as blended soil amendments in rice fields	Madhumita Ghosh and Ashalata Devi
SWM2019-113	Agricultural waste management through organic cultivation of Ridge gourd (Luffa acutangula Roxb.)	Naseema Rahman, DC Baruah, Sampriki Kakoti, Dipom Patowary, Deepa Borbora Phukan, D Hazarika, KK Sarma and DJ Nath
SWM2019-118	Discovering newer bacteria for valorization of agrowaste and an eye for biotechnological applications	Jahangir Hussain, Dr. Eeshan Kalita
SWM2019-120	Uptake of Arsenic by diatoms: a potential method of waste water treatment	Sangita Baruah, Kalyan Kr Hazarika, Kali Prasad Sarma
SWM2019-133	Phycoremediation of wastewater and their potential in biomass and biodiesel production	Khalifa S.M. H. Eldiehy, Doljit Borah and, Dhanapati Deka
SWM2019-135	Optimization and Characterization of Microcrystalline Cellulose extracted from Banana Cob	Julie Baruah, Eeshan Kalita
SWM2019-139	Application of water hyacinth biochar for remediation of metal contaminated soil	Nijara Baruah, Nirmali Gogoi, Juri Chetia and Debashree Dutta
SWM2019-146	Valorization of waste biomass for production of value added products	Nilutpal Bhuyan, Rumi Narzari, Debashis Sut, Neelam Bora, Rupam Kataki
	Energy Recovery	Session : 5
SWM2019-111	Possibility of Waste Aluminium Can for Solar Air Heater Absorber Material through Thermal Performance Studies	Priyom Goswami, Anindita Sharma, Pooja Dutta, Partha P. Dutta
SWM2019-115	Supercapacitor Energy Storage Devices in the Light of Waste Management: A Review	Arindam Dutta, Jiwajyoti Mahanta
SWM2019-116	Utilization of Waste Generated at Religious Establishments for Energy and Nutrient Recovery	Gaffer Ahmed, Dipam Patowary, Juri Chetia, DC Baruah
SWM2019-117	Pyrolytic Conversion of Polyalthia longifolia (Ashoka Leaves) at Different Temperatures for Production of Bio-oil and Biochar	Abhishek Singh, Gaffer Ahmed, Sneha Acharya, Harshal D. Kawale, Nanda Kishore
SWM2019-138	Performance Analysis of a Solar Assisted Water Electrolyzer (SAWE)	Nayan Moni Baishya, V Verma, BK Kakati
SWM2019-143	Synthesis and Characterization of Oxygen Reduction Reaction catalyst from waste rice straw	Lakhanlal, Biraj Kumar Kakati, Panchali Borthakur
Participant (only of attending)		
	Sulekha Doley	
	Aradhana Priyadasini	
	Vegonia Marboh	
	Yasmin Ara Begum	
	Shreya Bhattacharya	
	Abhik Gogoi	

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