International Conference on

Energy, Power and Environment

(Towards Clean Energy Technologies)

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National Institute of Technology Meghalaya, Shillong, India

ICEPE 2020

ICEPE 2020 Special Session (SS-08)

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1. Title of the special session

Development of automated municipal solid waste segregator with advanced sensing module: sustainable environmental perspective

2. Aims & Scope of the Session:

Increasing population level, urbanization and increasing living standards have enhanced the municipal solid waste generation in developing countries. Management of solid waste is getting increased attention at International and national levels for green sustainability. The whole process of municipal Solid Waste Management in both urban and peri-urban areas of India increase in volume and types of solid and hazardous waste as a result of continuous economic growth, urbanization and industrialization, is becoming an escalating problem for international and national governments to ensure effective and sustainable management of waste. It is estimated that India generates over 150,000 tonnes of municipal solid waste MSW per day, with Mumbai being the world's fifth most wasteful city. Yet, only 83 of waste are collected and less than 30 is treated. According to the World Bank, India's daily waste generation will reach 377,000 tonnes by 2025. The segregation, handling, transport and disposal of waste are to be properly managed so as to minimize the risks to the health and safety of patients, the public, and the environment. The economic value of waste is best realized when it is segregated. Currently there is no such system of segregation of dry, wet and metallic wastes at a household and environment level. This Session aimed to give a detailed overview about the design and develop of an Automated Waste Segregator for individual person, household, small business, or institution, such as a school or hospital, so that it can be sent directly for processing and converted in to energy for sustainable green energy management. According to the Ministry of Urban Development, 'Urban Infrastructure' should be equipped with all the necessary facilities and SWACHH BHARAT MISSION SBM URBAN NEEDS Modern and scientific Municipal Solid Waste Management for smart cities mission will be in line with our PM's make in India program.

3. Topics of interest in sensing mechanism include, but are not limited to:

- Green Energy and Smart systems for sustainable environment
- Green Computing and Green logistics with Big data for industry 4.0
- 6G Technology and Energy management
- Security issues in Green computing
- Applications, Integration and Trends of Renewable Energy Technologies for waste management
- Sustainable and Renewable Energy Systems
- Artificial Intelligence for Renewable Energy Systems

4. Special Session Organizers:

1. Dr. V. R. Sarma Dhulipala

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Dr. V. R. Sarma Dhulipala is Assistant Professor of Anna and Head, Interdisciplinary Research Laboratory, University-BIT Campus, Tiruchirappalli, Tamil Nadu. He obtained his Ph.D Degree in Wireless Sensor Networks from Anna University, Chennai in 2013, M.Phil from JNTU, Hyderabad in 2006 and M.Sc (Electronics) from Andhra University in 2000. His expertise in electronics leads him to teach subjects in electronics, Pervasive Computing. He worked as an associate in the departments of Nano Science and Technology and a research team member in Centre for Convergence of Technologies (CCT) in erstwhile Anna University, Tiruchirappalli. His research interests include Wireless and mobile ad hoc networks, Body Sensor Networks, Internet of Things (IoT) and Nano electronics. He has 90 International Research articles and guided 65 Post Graduate students for the core projects. Presently, he is working towards design and development of frameworks and algorithms using WSN and AHN for Medicinal Applications and IoT and guiding Doctoral Degree students.

2. Dr. S. Baskar

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Dr. S. Baskar, Assistant Professor in the Department of Electronics and Communication Engineering, Karpagam Academy of Higher Education Coimbatore, Tamil Nadu, India. He obtained his Ph.D. degree in Wireless Sensor Networks from Anna University, Chennai and obtained his ME (VLSI design) from S.N.S. College of Technology, Coimbatore in 2013 and BE (Electronics and Communication Engineering) from S.N.S. College of Technology, Coimbatore in 2009. His expertise in IoT, Wireless sensor networks and VLSI leads him to teach subjects in electronics, low power VLSI, human mission interface and pervasive Computing. He worked as a research assistant in the departments of Nano Science and Technology and Pervasive Computing Technology. His research interest includes Wireless sensor networks, Low power VLSI, IoT, Deep learning. He published more than 31 research articles in international journals, book chapters, and Conferences. So far, he guided 15 ME/M.Tech./BE projects. He is a reviewer for refereed journals like American Journal of electrical and electronic engineering, journal of computer sciences and applications in computer science and computing, American journal of sensor technology, wireless sensor networks, reviewer/editorial board member for international journal of innovations in engineering and science, Inderscience and IEEE access. He has granted with 15 patents out of 28 applied and Granted 4 copyrights. He is a young scientist Awardee by the Department of Science and Technology, Govt. of India.