

**International Conference on
Sustainable Energy Technologies and Computational Intelligence
(SETCOM 2025)
Department of Electrical Engineering, SoET
Pandit Deendayal Energy University (PDEU), Gandhinagar, Gujarat, India |**

February 21 – 23, 2025



SETCOM 2025 Special Sessions on

**“Soft Computing for Sustainable Smart Cities: Optimizing Urban Operations
and Enhancing Quality of Life”**

Aims & Scope of the Session (100-200 words): The increasing global urbanization poses multifaceted challenges, ranging from resource strain to compromised quality of life in metropolitan areas. Over half of the world's population residing in urban centres amplifies concerns such as inadequate infrastructure, pollution, public safety, and a burgeoning cost of living. Addressing these challenges is pivotal for sustainable development, and the emergence of smart cities offers a promising solution. The special session, "Soft Computing for Sustainable Smart Cities," emphasizes the integration of soft computing methods in urban planning. These techniques, encompassing optimization and decision-making, provide innovative solutions for smart garbage management, real-time control of power distribution, adaptive traffic signal systems, and more. The significance lies in optimizing urban operations, enhancing service delivery, and bolstering resilience against natural disasters. As soft computing increasingly permeates healthcare, transportation, and public safety sectors, exploring its applications becomes imperative for researchers and practitioners alike. This special session offers a platform to delve into cutting-edge advancements, fostering collaborative discussions on how soft computing can spearhead the development of intelligent, sustainable, and resilient urban environments worldwide.

Topics of interest include, but are not limited to:

- 1. Soft Computing Applications in Urban Infrastructure:**
 - Smart garbage management systems: Optimization and real-time monitoring.
 - Intelligent power distribution automation: Applications in energy systems.
 - Optimal design of roadside units (RSUs) infrastructure.
- 2. Electric Vehicle Infrastructure:**
 - Charging station optimization using soft computing.
 - Intelligent planning for electric vehicle charging infrastructure.
 - Integration of electric vehicles into the smart grid.
- 3. Smart Power Distribution Systems:**
 - Intelligent grid design and optimization.
 - Real-time monitoring and control of power distribution.
 - Integration of renewable energy sources in urban areas.
- 4. Microgrid Solutions for Urban Resilience:**
 - Implementing microgrids for localized energy distribution.
 - Enhancing resilience against power outages and disasters.
 - Smart energy storage systems.
- 5. Energy-Efficient Buildings and Smart Homes:**
 - Electrical systems for energy-efficient buildings.
 - Home automation and smart grid applications at the consumer level.
 - Integration of IoT devices for energy management.

6. **Intelligent Traffic Management Systems:**

- Adaptive traffic signal time settings using soft computing.
- Traffic flow optimization and congestion management.

7. **Smart Solutions for Public Safety:**

- Emergency management and response using soft computing.
- Predictive analytics for crime prevention.

8. **Data Analytics for Sustainable Development:**

- Soft computing in healthcare services and data analytics.
- Water supply optimization and resource management.

9. **Resilience Against Natural Disasters:**

- Soft computing applications in disaster preparedness and response.
- Enhancing urban resilience through predictive modelling.

10. **Human-Centric Smart City Solutions:**

- Improving citizen services using soft computing.
- Inclusive design and accessibility considerations.

11. **Case Studies and Practical Implementations:**

- Showcase of successful applications and real-world implementations.
- Lessons learned and best practices in the integration of soft computing in smart cities.

Special Session Organizers (names and contact emails):

Organizer 1:

Name: Dr. Vedik Basetti

Institutional e-mail: b.vedik@sru.edu.in

Affiliation: Department of Electrical and Electronics Engineering, SR University, Warangal, India, 506371

Fields of interest: Wide area monitoring of power systems, power system scheduling, evolutionary computation, and cyber security.

Institutional home page:

<https://sru.edu.in/faculty/FacultyProfile/6f450f2a88ef71732759843b610fa34eb16c2e789b0128c072bd33772c9c2efc040cb1d6bf08bf99d216cacf574f65daf539e76c07a264e90269dc84d28556272j36CDsgJxk2fQbSawTU3nTTcR2~wEEn3wwIoUHaRs4->

Organizer 2:

Name: Dr. Shubhashish Bhakta

Institutional e-mail: bhaktamelt@gmail.com

Affiliation: Department of Energy Resources Engineering, Pukyong National University, Busan 48513, South Korea

Fields of interest: Fuel Cell and Electrolyzer, Renewable energy and Artificial Intelligence, and Control Systems

Special Session Organizers (short bios with photo):

Organizer 1:

Dr. VEDIK BASETTI



Brief Bio: Dr. Vedik Basetti is currently an Associate Professor at SR University, Warangal, India. He has published 35 research papers in reputed international journals and 26 research papers in international conferences. He has published 35 SCIE/WOS papers. He is an editor for PLOS ONE Journal, e-prime - Advances in Electrical Engineering, Electronics and Energy Journal, and for edited book published in Elsevier. He is a regular reviewer of 20 different SCI journals and reviewed over 220+ manuscripts over the past five years. He received outstanding reviewer award from electrical power and energy journal in the year 2018. He has Google Scholar citations of 1178-plus, i-10 index of 37 and h-index of 23. He is a Senior Member of IEEE and Profession Member of ACM. His major areas of research interests include Wide area monitoring of power systems, power system scheduling, evolutionary computation, and cyber security.

Organizer 2:

Dr. Shubhashish Bhakta



Brief Bio: He is an accomplished academic and researcher in Electrical Engineering. He holds a Ph.D. from the Indian Institute of Technology, Dhanbad, India and has over nine years of experience as an Assistant Professor at various institutions. Shubhashish is recognized for numerous international publications and contributions to peer review processes. He is affiliated with esteemed professional organizations, including being a Life Member of the Solar Energy Society of India. Currently, he serves as a Research Professor at Pukyong National University, Busan, South Korea, focusing on renewable power generation, energy conservation, nonlinear control, and applications of Artificial Intelligence and Machine Learning