

# ICRERA 2025

## 14th INTERNATIONAL CONFERENCE ON RENEWABLE ENERGY RESEARCH AND APPLICATIONS

### **Assoc. Prof. Dr. Rana Ahmed**

Arab Academy for Science and Technology and Maritime Transport



**Paper ID** : 89

**Paper Title** : A Simulation-Based Study of Hybrid Renewable Energy System Powered Cold Ironing for Port Electrification

### **Bio :**

DR.Rana Ahmed is an accomplished Associate Professor of Electrical Engineering at the Arab Academy for Science and Technology and Maritime Transport, where she has been teaching since 2007. She specializes in electric power systems and brings extensive expertise in power quality, distributed generation, power converters for renewable energy systems, Smart grid, and Energy Management Systems particularly for hybrid renewable energy sources in rural areas. Rana earned her PhD in Electrical Engineering from Aix-Marseille University, France, in 2015, focusing her research on innovative energy solutions. She also holds a Master's and Bachelor's degree in Electrical Engineering from the Arab Academy for Science and Technology, graduating with honors in 2006 and 2010 respectively

Her research contributions are numerous, with publications in reputable journals and international conferences covering topics such as optimal placement of phasor measurement units, photovoltaic maximum power point tracking techniques, and smart energy management systems. Rana has actively participated in conferences worldwide, sharing her insights into renewable energy technologies and smart grid systems. Her dedication to advancing electrical engineering education and research is evident in her ongoing commitment to innovation and collaboration in her field.