

## ICRERA 2025

# 14th INTERNATIONAL CONFERENCE ON RENEWABLE ENERGY RESEARCH AND APPLICATIONS

**Farrukh Jamshed**

University of South Carolina, USA



**Paper ID** \_\_\_\_\_ : 285

**Paper Title** \_\_\_\_\_ : Digital control design for a universal input 1MHz LLC converter with high power density

### **Bio :**

Farrukh Jamshed is a Ph.D. researcher in the Department of Electrical and Electronics Engineering at the University of South Carolina, USA. His research focuses on high-frequency, high-power-density power converters utilizing wide-bandgap (GaN/SiC) devices for renewable energy and compact adapter applications.

He has over five years of international R&D experience in advanced converter design and PCB layout with parasitic and EMI considerations. Before joining the University of South Carolina, he worked as an Application Engineer at Songshan Lake Materials Laboratory, China and as a Research Engineer at the Shenzhen Institute of Wide Bandgap Semiconductors, China.

His current research focuses on advanced control of high-frequency power converters, emphasizing planar magnetics, parasitic extraction and modeling, and system-level optimization to achieve ultra-high-efficiency and high-power-density energy conversion.