

## *Special Session*

### **Title**

*Controlling and powering of smart greenhouses*

### **Session organizers**

**Dr. Riahi Jamel**, [jamel.riahi@poliba.it](mailto:jamel.riahi@poliba.it), Department of Electrical and Information Engineering – Polytechnic University of Bari, Italy, and Laboratory of Energy Applications and Renewable Energy Efficiency – University of Tunis El Manar. He is a researcher and member of the research unit at Politecnico di Bari, Department of Electrical Engineering and Information. He received his Ph.D. in Electrical and Information Engineering from the Polytechnic University of Bari, Italy, and a Ph.D. in Electronics from the University of Tunis El Manar, Tunisia, in 2021.

**Prof. Abdelkader Mami**, [abdelkader.mami@fst.utm.tn](mailto:abdelkader.mami@fst.utm.tn), Laboratory of Energy Applications and Renewable Energy Efficiency – University of Tunis El Manar, University Campus Farhat Hached, B.PN°94 Romana 1068 Tunis, Tunisia. He is a Professor at the Faculty of Sciences of Tunis El Manar and Director of the Laboratory of Energy Applications and Renewable Energy Efficiency (LAPER).

**Prof. Silvano Vergura**, [silvano.vergura@poliba.it](mailto:silvano.vergura@poliba.it), Department of Electrical and Information Engineering – Polytechnic University of Bari, Via Amendola n. 126/B 70126 Bari, Italy. He is Full Professor in Electrotechnics, Scientific Director of the Renewable Energy Laboratory (RELAB), and his research activity is focused on photovoltaic systems and their control and diagnostics.

### **Brief Description of the session thematic**

*Greenhouses are essential in modern agriculture, providing controlled environments for optimal plant growth. The primary goal of a greenhouse is to create a stable environment that can be manipulated to meet the specific needs of different crops, regardless of external weather conditions. Furthermore, the management and powering of the are crucial for optimizing plant growth and ensuring sustainability in agricultural practices. Advanced technologies in climate control, irrigation, monitoring, and renewable energy integration play a vital role in modern greenhouse operations. By leveraging these technologies, greenhouse operators can achieve higher yields, better quality crops, and reduced environmental impact, ensuring a sustainable future for agriculture.*

*This special session focuses on the current challenges of controlling and powering greenhouse systems to improve efficiency and reduce energy consumption in the agricultural sector.*

### **Topics and Keywords**

*Monitoring and Smart Control Systems*

*Renewable Energy and storage System integration*

*Automation, Control and Smart Technologies*  
*IoT agriculture*  
*Artificial intelligence and optimization methods*

## **Number of pages**

*4 to 6 pages*

## **Deadlines**

*Full paper submission: June 15th, 2024*

*Authors' notification: August 30th, 2024*

*Camera-ready paper submission: September 15th, 2024*

## **List of potential reviewers**

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## **Submissions Procedure**

*The instructions for the submission of are included in the conference website through the following link:*

*<https://icaige.tn/>*