1st International conference on 3ETGE "International Conference on Electrical Engineering, Energy Technologies and Green Environment"

Status Report & Interconnected Futures

Conference web site: www.ic3etge.com

- **Date of the Conference: November 03, 04 and 05, 2026**
- **Location: Guelmim Higher School of Technology.**

FIRST CIRCULAR

CONGRES MAIN THEMES AND TOPICS

1. **Electrical Engineering and control**
2. **Thermal Engerning, Renewable Energies and Sustainable development**
3. **Smart and Intelligent Systems Modeling and Simulation**
4. **Green Hydrogen Technologies and Applications**
5. **Desalination Technologies, Wastewater Treatment and Environmental Protection**

The ***1st International Conference on Electrical Engineering, Energy Technologies and Green Environment (IC3ETGE 2026)*** serves as an international forum for the dissemination of high-quality research and the exchange of scientific and technical knowledge among researchers, academics, industry practitioners, and policymakers. The conference addresses recent advances and emerging challenges in sustainable electrical engineering, with a strong focus on renewable energy systems, intelligent control and decision-making technologies, green hydrogen production and applications, and environmental protection.

The increasing penetration of renewable energy sources, the evolution of smart and intelligent systems, and the development of green hydrogen technologies are reshaping modern electrical infrastructures. In this context, the conference emphasizes innovative methodologies, advanced modeling and control techniques, and practical solutions that enhance system efficiency, reliability, resilience, and environmental sustainability.

By promoting interdisciplinary research and collaboration between academia and industry, the conference aims to contribute to the development of sustainable, intelligent, and environmentally responsible electrical systems, while supporting global efforts toward decarbonization and sustainable development.

Session 1: Electrical Engineering and control

Objective:

Intelligent Systems aims to design and implement a distributed edge computing framework for smart systems, enabling efficient processing and analysis of data at the network edge to reduce latency, improve real-time decision making, and optimize resource utilization in diverse applications in healthcare, education, manufacturing, agriculture, smart cities, and other domains.

Topics:

- Embedded Control Systems and Applications
- Real-Time Embedded Systems for Control
- Signal Analysis and Processing
- Smart grids, microgrids, and active distribution networks
- Integration of renewable energy sources and inverter-dominated systems
- Stability, Reliability, and Optimal Management of Modern Power Grids
- Classical, advanced, robust, adaptive, and predictive control techniques
- Artificial intelligence and data-driven control in electrical systems
- Contorl of Power electronics, converters, and electric drives
- Electrical machines, condition monitoring, and fault diagnosis Control
- Measurement, instrumentation, cybersecurity, and standards
- Electric vehicles, charging infrastructures, and grid interaction
- Cyber-physical systems and emerging trends in electrical engineering

Session 2: Thermal Engerning, Renewable Energies and Sustainable development

Objective:

The large-scale integration of renewable energy sources has significantly intensified the need for advanced control technologies, innovative management strategies, and modern devices. This focal area offers a platform for researchers, students, and industry professionals to share ideas and knowledge, foster networking, develop interdisciplinary collaborations, and stay informed about the latest innovations in these fields.

Topics:

- Renewable Energy Technologies
- Advanced materials for renewable energy applications.
- Energy storage and associated materials.
- Thermal Performance of Energy-Efficient Buildings
- Power-to-X Pathways for Renewable Energy Valorization
- Renewable Energy Systems and Thermal Energy Integration
- Heat and Mass Transfer and Fluid Mechanics
- Thermal Engineering in Porous Media
- Energy Conversion and Thermal Systems
- Computational Heat Transfer and CFD
- Thermal Management and Waste Heat Recovery in Sustainable Energy Systems
- Materials for Solar Thermal and Hybrid Energy–Heat Systems
- Innovative and Eco-Friendly Materials for Energy-Efficient Buildings

Session 3: Smart and Intelligent Systems Modeling and Simulation

Objective:

The theme "Smart and Intelligent Systems, Modeling and Simulation" focuses on the development and application of advanced modeling, simulation, and intelligent techniques for the analysis and optimization of complex systems. This theme highlights the role of modeling and simulation as essential tools for system design, performance evaluation, and decision support, particularly when integrated with artificial intelligence, machine learning, and advanced control strategies. Contributions aim to bridge the gap between theoretical models and real-world applications, enabling efficient validation, risk reduction, and cost-effective development.

Topics:

- Modeling and Simulation of Energy Systems and Power Generation Technologies
- Modeling, Analysis, and Control of Electrical Power Systems and Smart Grids
- Artificial Intelligence and Data-Driven Methods for Smart Energy Systems
- Advanced Control and Optimization Techniques for Intelligent Power Systems
- Multi-Physics Simulation of Materials, Components, and Energy Systems
- Multi-Scale and Multi-Domain Modeling of Complex and Intelligent Systems
- Thermal and Electrical Modeling and Optimization of Energy and Industrial Systems
- Modeling, Control, and Real-Time Simulation for Energy and Industrial Applications
- AI-Based Modeling and Advanced Control Strategies for Hydrogen and Emerging Energy Systems
- Simulation, Reliability, Safety, and Resilience of Smart and Critical Energy Systems

Session 4: Green Hydrogen Technologies and Applications

Objective:

The transition from fossil to renewable sources of energy is highly needed in order to limit the consequences of climate change, which has harmful effects on many terrestrial and aquatic species. In this objective, the independence from fossil energy could be attenuated by many green ways of energy production; such as wastes valorization, contributing thus to the energy independence of developing countries and the decarbonization of their economies. In this session, will be discussed methodologies and findings related to the impact assessment of renewable energy systems on ecosystems, biodiversity, and climate changes.

Topics:

- Hydrogen integration in buildings and microgrids
- Industrial applications of green hydrogen
- Power-to-X and Green Hydrogen
- Hydrogen Production from Renewable Sources
- Hydrogen applications in transportation, industry, and buildings
- Power-to-Hydrogen and Power-to-X solutions
- Environmental impact, CO_2 reduction, and hydrogen economy perspectives
- Hydrogen storage, transportation, and distribution technologies
- Deployment of green hydrogen in developing countries
- Safety, reliability, and standards for hydrogen systems
- Green Hydrogen and Haber–Bosch for Sustainable Ammonia
- Green Hydrogen Utilization in Internal Combustion Engines

Session 5 : Desalination Technologies, Wastewater Treatment and Environmental Protection

Objective:

The theme Desalination Technologies, Wastewater Treatment and Environmental Protection emphasizes the development and optimization of desalination and wastewater treatment systems through energy-efficient processes, renewable energy integration, intelligent monitoring, and advanced modeling and simulation techniques. A key objective is to reduce environmental impacts, operational costs, and energy consumption while enhancing system reliability, resilience, and performance.

Topics:

- Sustainable management of natural water resources
- Conventional and hybrid desalination systems
- Brine management and environmental impacts
- Energy-efficient desalination technologies
- Application of renewable energies in water desalination systems
- Artificial intelligence applied to desalination and water treatment
- Conventional and advanced wastewater treatment processes
- Treated wastewater reuse for agriculture and industry
- Energy storage solutions for water treatment plants
- Environmental impact assessment and mitigation strategies
- Circular economy approaches in water and wastewater management
- Materials engineering: production, characterization, applications, corrosion control and membrane science
- New tools in pesticides detection and analysis

SUBMISSION / GUIDELINES TO AUTHORS

The authors are invited to fill the registration form and submit the abstract using the Template available at the Conference web site: www.ic3etge.com

The Abstract should be sent, according to the research domain to: session_num@ic3etge.com , with **"num = 1, 2, 3, 4, or 5"** to specify the session number, no later than April 15, 2026, and Registration form no later than July 15, 2026

Please indicate "Name of the Section" in the subject of your message. The file title of your abstract should be noted as follow: "*************".

The communication can be presented in English or French, however, the Power Point slides should be in English. The Posters have also to be written in English.

KEY DATES

- April 15, 2026: Paper submission deadline
- June 15, 2026: Acceptance notification
- July 15, 2026: Normal registration fees
- November 03, 04 and 05 2026: EEETGE Conference