

# **2024 OkIP International Conference on Energy and Sustainable Technologies (CEST)**

**Monday, 1 April 2024 - Thursday, 4 April 2024**

**Tiako Center, Oklahoma City, OK, USA & Online**

## **Scientific Tracks**

## **Green Generation/Management**

Energy Management/Storage/Recycling  
Electric/Hybrid Vehicles | Green Energy Boost  
Hydrogen, Fuel cells, Energy Carriers  
Energy Harvesting | Biofuel Generation  
Wind/Geothermal Power | Efficient Lighting  
Solar/Biomass Energy | Efficient Power  
Combustion Fuels and Renewable Sources  
Uninterruptible Power Supply  
Grid-Oriented Energy Systems  
Circuitry for Energy Harvesting/Scavenging  
Energy Reduction/Conservation  
Innovative HVAC Systems | Photovoltaic Cells  
Power Quality/Filtering Techniques  
Energy System Operational Strategies  
Advanced Metering Infrastructure  
Power Distribution Grids | Hydropower  
Sustainable School/Education  
Battery Materials/Mechanisms/Optimization  
Pervasive Energy Services  
Other

## **Sustainable Designs/Innovations**

Strategies for Sustainability  
Performance Evaluation | Wearable Electronics  
Green Building-Components/Systems-Mngmt  
Efficient Circuit Design for Energy Harvesting  
Ergonomics and Sustainability  
Building and Low Environmental Impact  
Sustainable Building Design/Construction  
Home and Commercial Automation  
Ocean-Wave/Under-Water Energy Harvesting  
Energy-Efficient Renovation  
Clean Energy Architectural Solutions  
Other

## **Smart Systems/Infrastructures**

Smart Construction/City/Vehicle  
Grid Modernization | Efficient Wind Turbines  
Digital Communication and Control  
Evolution/Integration of Renewable Energy  
Reduction of Emission Energy Sources  
Smart Grids/Microgrids/Meters/Appliances  
Internet of Things (IoT) and Sustainability  
Smart Energy Management Systems  
Smart Urban Development  
Intelligent Transportation Systems

Smart Manufacturing/Factory  
Unmanned Aerial Systems and Sustainability  
Other

## **Legal/Social/Economic Sustainable/Energy Issues**

Emerging Standards | Ecosystem Monitoring  
Carbon footprints and Metering  
Reduced Carbon Emission | Climatic Data  
Regulatory Issues and Standards  
Safety and Protection of the Environment  
Developed/Emerging Country Tech./Issues  
Spill Prevention and Control  
Deregulation and Electric Power Market  
Climate Change | Renewable Energy Sources  
Green Business Practices | Airborne Substances  
Environmental Pollution Issues  
Ecosystem Modeling | Green Protocols  
Nuclear and the Environment  
Other

## **Green IT/Computing**

Energy-efficient Protocols and Networking  
IT de-Manufacturing | Disaster Control  
Legitimate IT Recycling | Sustainable Software  
Energy Efficient IT solutions & Algorithms  
Green Software Design/Development  
Energy Efficient Algorithms  
Sensor Networks Usage | Sustainable Big Data  
Network Concepts | Efficient Data Centers  
Climate and Disaster Monitoring  
AI & Expert Systems for Sustainability  
Optimization techniques for energy applications  
Green Cloud/IoT/Communication Technologies  
Energy-Efficient Data-Centers/Networks  
Energy-Efficient Machine Learning Approach  
Other

## **Biomedical/Biotechnology**

Digital Health/Wellness  
Advances in Pharmaceutical-Industry/Imaging  
Environmental Protection | Biodegradation  
Portable Medical/Biomedical Devices  
Chemical/Agro-Chemical Safety  
Devices for Disabled/Handicapped  
Marine Microalgae Harvesting | Detoxification  
Biodiesel Production/Agricultural Crop  
Electrochemistry Renewable Fuel

Pollution Biodegradation | Soil Contamination  
Organic Photovoltaic Cells | ...  
Other

## **Forecasting/Water/Sanitation**

Forecasting Techniques and Predictions  
Weather Analysis | Life/Property Protection  
Societal impacts of weather | climate monitoring  
Weather Accessibility and Understandability  
Water Systems and Sustainability  
Sanitation/Water supply| Sinkhole Identification  
Gaseous Benzene Remediation  
Other

## **Energy Generation/Storage**

Storage Technologies/Deployment/Economics  
Nuclear | Hydrogen | Fuel Cell-based Systems  
Energy Harvesting/Generation | Inverters  
Biofuel/Biomass Generation | Geothermal  
Circuitry for Energy Harvesting/Scavenging  
HVAC Systems | Transformers  
Energy System Operational Strategies  
Energy Carriers/Distribution/Consumption  
Hybrid Battery/Super Capacitors | Short-Circuit  
DC-AC Converter and Battery Storage System  
Uninterruptible Power Supply | Power supplies  
Demand/Conservation/Supply/Policy  
Clean/Future Energy | Natural Gas | Recycling  
Optimization/Consumption/Conversion  
Balance/Reliability/Strategy/Flow  
Utilization/Complementation | Mobile Storage  
Distributed Systems | Generation Capacity  
Distributed/Hybrid/Optimal Generation  
Liquid Air/Offshore Generation/Storage  
Other

## **Power/Energy Systems**

Usage | Conservation | Management |  
Pervasive Services | Power Security/Stability  
Efficiency | Quality and Filtering Techniques  
Planning and Forecasting | Efficient Lighting  
Operational Strategies | Distribution Issues  
Advanced Metering Infrastructure | Converters  
Generation Technologies and Power Apparatus  
Operation| Automation | Distributed Systems  
Control Method/Techniques | Nuclear Station  
Optimization | Reliability | Transmission Lines

Quality Monitoring and Mitigation | Security  
Converters Technologies/Topologies | Safety  
Power Electronics in Complex Systems  
Quality-Issues/Supplies | Condition Monitoring  
Integration/Packaging/Thermal-Management  
Power Devices/Driving Circuits | Compensation  
Performance Analysis | Vulnerability | AC/DC  
New Trends/Technologies | Policy | Strategy  
Future Challenges and Directions | Maintenance  
Hard/Soft Switching Techniques | Protection  
Asset Management | Wide-Area Systems  
Signal-Processing/IT/Computing in Power  
Other

## **Grid & Electrical Vehicle (EV)**

Micro/Nano Grids | Smart Grid Technologies  
Station/Substation Protection | Dispatch Mode  
Hybrid/Multi Microgrids | Grid Modernization  
Smart Grids/Microgrids/Meters/Appliances  
Grid-Interactive Systems | Grid Resiliency  
Battery Charging Technologies/Systems  
Battery Materials/Mechanisms/Management  
Contact/Contactless Battery Chargers  
Electric/Hybrid Vehicles | Distribution Grids  
Vehicular Technology Energy Saving  
EVs Components/Grid-Interactions | Safety  
Electric-Propulsion/Drive Systems | Weak-Link  
Fault Coordination/Protection of Grids  
Grid Resiliency/Integration/Interfacing/Control  
Cyber and Physical Security of Power Grid  
Grid Internet of Things/Everything (IoT/IoE)  
Power Fluctuation | Dispatch Mode | Adequacy  
Other

## **IA in Power/Energy/Sustainability**

Big-Data | Machine Learning | Data Analytics  
Deep Learning Model | Evolutionary Algorithm  
Estimation/Identification Methods  
Measurement Control/Techniques  
Motion Control | Robotics | Special Drives  
Factor/Disturbance Correction Techniques  
Decision Support Systems| Topology Control  
Frequency Control/Normalization  
Fault/Voltage Diagnosis/Control | Measurement  
Predictive Model | Network Analysis  
Line Monitoring/Inspection | Decarbonization  
Emergency/Flow/Power-Outage Management  
Anomaly Detection/Mitigation | Efficiency  
Multi-Machine Systems | Smart Ballasts  
Computational Methods | Damage Prevention

Impedance-Model/Frequency Scan Analysis  
Sustainable AI  
AI in Energy Grids/Agriculture  
AI in Sustainable Supply Chains  
AI in Environmental Monitoring/Enforcement  
AI for Enhancing Weather/Disaster Prediction/Response  
Other

## **Renewable/Sustainable Energy**

Wind Farm | Novel Energy Conversion Studies  
Renewable Energy (RE) Evolution/Integration  
RE Systems Management/Awareness/ IoT  
RE Systems Education | Energy Internet  
Wind Hydropower | Solar Energy | RE Market  
Biomass/Biofuel | RE Transmission/Storage  
Geothermal/Wave/Tidal Energy | Wind Power  
Energy-Efficient Protocols/Data-Centers  
RE Distribution/Wireless/Cellular Network  
Electric Machinery/Control Energy Saving  
Green IT/Computing/Communication  
Power/Energy Legal/Social/Economic Issues  
Virtual Power Plant | Storage System  
Electricity Market/Policy/Regulatory Aspects  
Solar Radiation Forecasts |Greenhouse Gas  
Regenerative Power | PV Module Performance  
Energy Saving/Surplus Power | RE Reliability  
Other