

附件 1

iSPEC2023 征文主题

iSPEC2023 征文主题包括但不限于：

1. 碳中和与能源转型

- 实现净零碳电力能源系统的路线图和解决方案
- CO₂ 捕获、转化和利用
- 电力和能源系统低碳运行与规划
- 碳足迹及交易

2. 综合能源系统

- 综合能源系统建模、规划与运行
- 综合能源系统可靠性与韧性
- 信息物理系统仿真与分析
- 电力市场与能源交易
- 交通电气化及其对电力能源系统的影响

3. 高比例可再生能源并网

- 不确定性分析、建模与预测
- 电力系统规划与运行
- 电力系统稳定、可靠性与韧性
- 微电网与主动配电网
- 电力系统保护与控制

4. 电力电子化电力系统

- 电力电子化电力系统的建模与仿真
- 电力电子化电力系统的稳定性与可靠性
- 电力电子化电力系统运行与规划
- 电力电子化电力系统保护与控制
- FACTS、HVDC 和固态变压器

5. 新兴技术应用

- 机器学习与大数据分析
- 区块链
- 5G 网络与通讯
- 云计算与边缘计算
- 物联网与数字孪生

The conference organizing committee invites contributions in all areas related to power and energy technologies, including (but not limited to) the following:

1. Carbon Neutralization and Energy Transition

- Roadmap and solutions towards net-zero carbon power and energy systems
- CO₂ capture, conversion and utilization
- Low carbon operation and planning of power and energy systems
- Carbon footprint and transaction

2. Multiple Energy Systems Integration

- Modeling, planning, and operation of multiple energy systems
- Reliability and resilience of multiple energy systems
- Simulations and analyses of Cyber-Physical Systems
- Electricity market and energy transaction
- Transportation electrification and its impacts on power and energy systems

3. High Penetration of Renewable Energy

- Uncertainty analysis, modeling, and forecasting
- Planning and operation of power systems
- Stability, reliability and resilience of power systems
- Micro-grids and active distribution systems
- Power system protection and control

4. Electronic Power Grid Systems

- Modeling and simulations of electronic power grids
- Stability and reliability of electronic power grid systems
- Operation and planning of electronic power grid systems
- Protection and control of electronic power grid systems
- FACTS, HVDC and solid state transformer

5. Application of Emerging Technologies

- Machine learning and big data analyses
- Blockchain
- 5G network and communication
- Cloud computing and edge computing
- Internet of Things and digital twin