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**

* 电子电子化电力系统的建模与仿真
* 电子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

1. **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

1. **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

1. **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

1. **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