



海外专家系列报告

——并网逆变器:挑战和解决方案及合作探讨

时间: 2023年11月18日

线上报告: #腾讯会议: 196-980-842(上午) 10:00-11:00

#腾讯会议: 933-177-034(下午) 14:00-15:00

线下报告: 文昌校区教四楼101

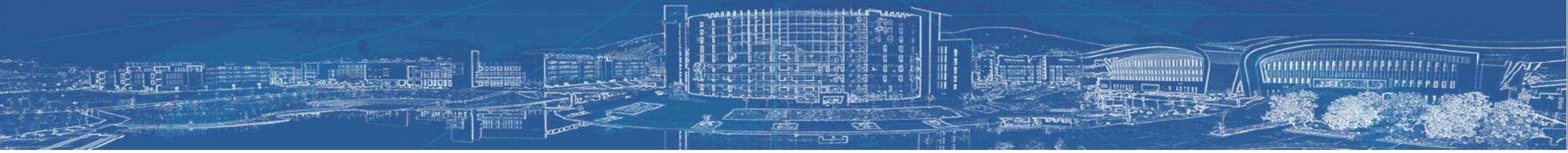
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- 学术报告1: Grid-forming inverters: Challenges and solutions
- 报告人: Alexandros Paspatis Manchester Metropolitan University, U.K.
- 时间: 11月18日10:00-11:00
- 报告简介: In this report, a novel nonlinear droop control method is proposed for three-phase grid-supporting inverters that rigorously guarantee limited rms value of the inverter current and closed-loop system stability under both normal grid conditions and balanced voltage sags. Contrary to the traditional dq frame approaches that align the inverter output voltage with the d-axis, the proposed controller aligns the inverter current with the d-axis resulting in the desired current limitation and detailed closed-loop system stability conditions. Inspired by the recently presented state-limiting PI controller and using nonlinear invariant set theory, it is rigorously proven that the rms value of the inverter current is always limited below a given value, even during transients or faults, without requiring additional adaptive saturation units, as commonly applied in conventional approaches. Furthermore, analytic conditions for the controller parameter selection are provided to ensure asymptotic stability for the entire closed-loop grid supporting inverter for the first time without depending on particular values of the filter and line parameters.



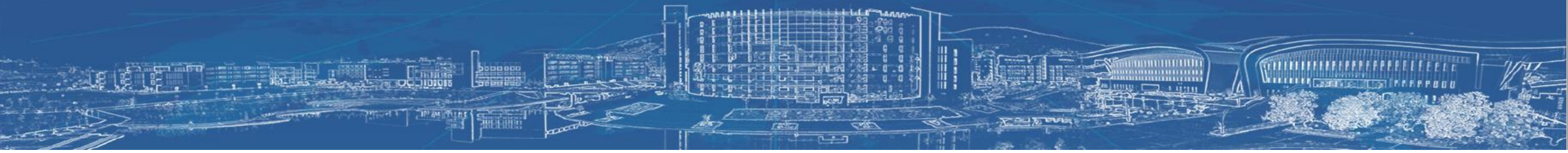
- 学术报告2: Research collaboration proposals between MMU and CUMT
- 报告人: Alexandros Paspatis Manchester Metropolitan University, U.K.
- 时间: 11月18日14:00-15:00
- 报告简介: This report first introduces the history, culture and talent development of the University of Manchester. It is a comprehensive public university in the UK with a wide range of subjects and departments, located in Manchester, the second busiest city in the UK in the north of central England. At present, there are nearly 40,000 students from more than 160 countries enrolled in more than 1,000 degree programs, and more than 10,000 faculty members, many of whom are world-renowned scientists. Then introduce the team members and the main research direction, and discuss the future cooperation direction with China University of Mining and Technology. Especially in the field of new energy power generation and electric vehicles





报告专家简介:

Alexandros Paspatis , 于2016年获得希腊色雷斯德谟克利特大学电气与计算机工程学士学位, 并于2020年获得英国谢菲尔德大学自动控制与系统工程博士学位。在整个2018年期间, 他担任英国谢菲尔德大学自动控制与系统工程系的研究助理。从2020年到2023年, 他在希腊雅典国立技术大学电气与计算机工程学院担任博士后研究助理, 并在希腊地中海大学电气与计算机工程系担任兼职讲师。自2023年起, 他在英国曼彻斯特城市大学担任讲师(助理教授), 并与湖北大学曼城联合合作。





承办单位:

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