Special Issue

Modern Design and Application of High-Voltage Circuit Breakers

Message from the Guest Editors

Circuit breakers (CBs) are switching devices that can make, carry, and break a current under normal circuit conditions and can also make or break a fault current under an abnormal circuit at a specific time interval. The development of CBs, revolving around the findings of new electric insulation and arc quenching mediums, has been going on for more than 100 years. Usually, different insulation and arc quenching mediums result in different kinds of CBs, like oil-CBs, ari-CBs, SF6-CBs, vacuum-CBs, and so on. This Special Issue is expected to collect new ideas and approaches that address current unsolved problems and challenges related to the modern design and application of CB technologies. Research areas may include (but are not limited to) the following:

- Emerging HV CB technologies (such as high voltage fast vacuum circuit breaker technologies, SF6 alternatives, and DC circuit breakers).
- Semiconductor CB technologies (including HV DC).
- Digital design/twin technologies and AI modeling in CBs.
- Intelligent operating, monitoring, and status estimation technologies for servicing CBs.
- Fundamental physics in HV CBs.

Guest Editors

Dr. Xiaofei Yao

State Key Laboratory of Electrical Insulation and Power Equipment, Xi'an Jiaotong University, Xi'an 710049, China

Dr. Siyuan Liu

School of Electrical Engineering, Xi'an Jiaotong University, Xi'an 710049, China

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Electronics
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
electronics@mdpi.com

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Electronics is a multidisciplinary journal designed to appeal to a diverse audience of research scientists, practitioners, and developers in academia and industry. The journal is devoted to fast publication of latest technological breakthroughs, cutting-edge developments, and timely reviews of current and emerging technologies related to the broad field of electronics. Experimental and theoretical results are published as regular peer-reviewed articles or as articles within Special Issues guest-edited by leading experts in selected topics of interest.

Editor-in-Chief

Prof. Dr. Flavio Canavero
Department of Electronics and Telecommunications, Politecnico di Torino, 10129 Torino, Italy

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