

SEMINAR ANNOUNCEMENT

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING
COLLEGE OF DESIGN AND ENGINEERING

Website: <https://cde.nus.edu.sg/ece>

Area: Power & Energy Systems

Host: Assoc Prof Yung.C Liang

TOPIC	:	Development of SiC Based Solid-State Circuit Breaker
SPEAKER	:	Ms Chenzhen Wu Graduate Student, ECE Dept, NUS
DATE	:	Wednesday, 20 April 2022
TIME	:	11.00AM to 11.45AM
WEBINAR	:	Join Zoom Meeting https://nus-sg.zoom.us/j/88618042155?pwd=c0xjQUF1ZkJOUFRkQ2dvVEtPaEc3QT09 Meeting ID: 886 1804 2155 Passcode: 032928

ABSTRACT

Fault protection and real-time monitoring of Satellite Electrical Power Systems (SEPS) are of importance for the advancement of modern satellite systems of small sizing and long lifespan. Conventional protection methods could handle the overcurrent faults but lack flexibility in fault clearance time. With these important considerations, a compact and programmable Silicon Carbide (SiC) power MOSFET based DC circuit breaker module is developed to not only handle all levels of overcurrent faults with suitable time-delay protection scheme, but also provide the real-time monitoring of circuit breaker status by using the Long Range (LoRa) and Internet of Things (IoT) Technology. The proposed module has been implemented and its effectiveness was tested and confirmed in laboratory under various overcurrent fault conditions.

BIOGRAPHY

Chenzhen Wu is currently working towards her MEng degree in the Electrical and Computer Engineering Department at the National University of Singapore. Her research interests include the development of embedded systems, electronic hardware design.

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