SEMINAR ANNOUNCEMENT

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING
Faculty of Engineering
Website: https://www.eng.nus.edu.sg/ece/

Area: Microelectronic Technologies and Devices

Host: Dr Evgeny Zamburg

TOPIC	:	**Investigation Of The Resistive Switching Mechanism In Defect Engineered WSe2 Memtransistors**
SPEAKER	:	**Mr Leong Jin Feng** **Graduate Student, ECE Dept, NUS**
DATE	:	**Tuesday, 28 July 2020**
TIME	:	**10.00AM to 11.00AM**
WEBINAR	:	**Join Zoom Meeting** **https://nus-sg.zoom.us/j/95627986635?pwd=dThTRkorNmU4bEt4bGppRUhYTDVEUT09** **Meeting ID: 956 2798 6635** **Password: 151766**

ABSTRACT

Memtransistors are potential candidates for applications to integrate of logic and non-volatile memory systems on chip. However, realisation of such applications using 2D materials is limited by the lack of understanding of defects transport related switching. In this work, a physical model incorporating non-equilibrium vacancy transport has been developed to investigate defect-engineered WSe2-based devices. This model, supported by various material and electrical characterisation performed, showcases the significance of channel electrostatics to influence resistive switching. We report on WSe2-based memtransistor as a synaptic device to demonstrate of potentiation and depression of analogue memory states.

BIOGRAPHY

Leong Jin Feng is currently a PhD student in Electrical and Computer Engineering Department, National University of Singapore. His research mainly focuses on two-dimensional materials based memory devices.

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