

SEMINAR ANNOUNCEMENT

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING

Faculty of Engineering

Website: <https://www.eng.nus.edu.sg/ece/>

Area: Integrated Circuits & Embedded Systems

Host: Dr. Tao TANG

TOPIC	:	Epilepsy Detection Systems – Problem Formulation And What To Expect Next?
SPEAKER	:	Mr Miaolin ZHANG Graduate Student, ECE Dept, NUS
DATE	:	Monday, 22 February 2021
TIME	:	11.00AM to 11.30AM
WEBINAR	:	Join Zoom Meeting https://nus-sg.zoom.us/j/81669825089?pwd=M3lscWh2dUd6ZEF5TjVvajNiUXNYdz09 Meeting ID: 816 6982 5089 Password: 012962

ABSTRACT

There are 50 million people suffering from epilepsy around the world based on the survey carried out by WHO. Epilepsy can cause a horrible life by bringing patients to dangerous situation like lost control of their body or even unconscious state during the epilepsy onset. Unfortunately, even after decades of science and clinical study there is no perfect cure for epilepsy. For a large proportion of the patients, they can take medicine to mitigate their symptoms or accept brain surgery to reduce the chance of epilepsy onset. There are still 30% of patients who do not respond to medicine and cannot have the brain surgery due to their body's physical condition. Also, patients are constantly required to be hospitalized for a long time to record EEG signal in order to get proper treatment. To alleviate the societal expense as well as providing a better life for epilepsy patients, researchers are providing integrated system-level solutions. In this seminar, the difficulties of epilepsy detection will be introduced first and followed by the development of the state-of-the-art epilepsy detection systems. Lastly, what is the next direction for researchers to look at will be briefly discussed.

BIOGRAPHY

Mr. Miaolin ZHANG received his B.Eng. degree in Electronic Engineering from University of Electronic Science and Technology of China (UESTC), Chengdu, China, in 2017. He also received distinguished graduate diploma from University of Strathclyde, Glasgow, UK in 2017 as a undergraduate final year exchange student. He is currently focusing on the energy-efficient circuit design for resource constrained biomedical applications at ECE department of NUS. His research interests include energy-efficient machine learning accelerator design, biomedical system-on-chip design.

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