

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: Assoc Prof Heng Chun Huat

Lecture/Teaching Seminar

TOPIC	:	An Introduction to DRAM
SPEAKER	:	Dr. Jason K. Eshraghian University of Michigan
DATE	:	Wednesday, 5 August 2020
TIME	:	1.00PM to 2.00PM
WEBINAR	:	Join Zoom Meeting https://nus-sg.zoom.us/j/4156763801?pwd=cUdJUkFBZC85eVI5OEEd5aHhrSDhNUT09 Meeting ID: 415 676 3801 Password: 335166

ABSTRACT

This lecture will provide an introductory overview of the operation of DRAM. We will start with the basic structure of a MOSFET, and build up towards a 1-capacitor-1-transistor DRAM array. We will learn about the causes of charge leakage, the need for DRAM refresh, and where bit-line capacitance comes from. By the end, students will be able to calculate the effects of charge-sharing between a pair of capacitors, and understand how this will impact signal strength.

BIOGRAPHY

Jason K. Eshraghian is a Post-Doctoral Researcher at the Department of Electrical Engineering and Computer Science, University of Michigan in Ann Arbor. He received the Bachelor of Engineering (Electrical & Electronic) and the Bachelor of Laws degrees from The University of Western Australia, Perth, WA, Australia in 2016, where he also completed his Ph.D Degree. From 2015 to 2016, he was a Research Assistant at Chungbuk National University, South Korea. Since 2019, he has been heavily involved with the AI-healthcare industry as the CTO of iDataMap Corporation, and an Analog Design Engineer with HummTech. He is also a member of the IEEE Neural Systems and Applications Technical Committee. His current research interests include neuromorphic computing and RRAM-based in-memory processing. Jason was awarded the 2019 IEEE Very Large Scale Integration Systems Best Paper Award, and the Best Paper Award at the 2019 IEEE Artificial Intelligence Circuits and Systems Conference for his work in neuromorphic vision.

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