
MARWAN ELADL

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EDUCATION

University of Illinois Urbana-Champaign - Bachelor of Science - Electrical Engineering - May 2021 - Highest Honors - GPA: 3.94

University of Illinois Urbana-Champaign - Master of Science - Electrical Engineering - May 2023 - GPA: 3.89

Columbia University - Ph.D. - Electrical Engineering - Expected: May 2028

PERSONAL PROFILE

I am a third-year graduate student in the electrical engineering department working on new forms of computing. I strive to develop lower power and higher speed electronic devices using new material systems whether that be semiconducting or biological. I am proficient in the development of fabrication processes, the use of semiconductor modeling TCAD software such as Crosslight, and the maintenance and modification of fabrication tools to tailor them to a fabrication process. I communicate concisely and accurately allowing for more efficient conveyance of ideas and improved teamwork.

EXPERIENCE

Zhu Group of 2D Materials at Holonyak Micro & Nanotechnology Lab - Urbana, IL: June 2019 - May 2023

Graduate Research Assistant: Responsibilities included TMD material growth using both CVD and MOCVD, modifying the growth tools to improve the processes, and making devices to test the grown materials. Additionally, worked on conceiving and developing new and innovative 2D material device structures, mainly focusing on magnetic/spin devices.

University of Illinois Urbana-Champaign Grainger College of Engineering - Urbana, IL: January 2020 - May 2023

Teaching Assistant: ECE 443 LEDs and Solar Cells (January 2020-May 2021)/ECE 482 Digital IC Design (August 2021-December 2021)/ ECE 385 Digital Systems Lab (December 2021- Present): Responsibilities included grading homework and quizzes, holding office hours, creating content for the class, and managing the class website.

The Aerospace Corporation - El Segundo, CA: June 2021 - August 2021/May 2022 - August 2022/June 2023-August 2023

Microelectronics Fabrication Intern Researcher: Duties included development and improvement of the spin-FET fabrication process to physically realize the first spin-FET and magnetically testing these spin-FETs. Additionally, I trouble shot and fixed fabrication tools when maintenance or modification were required.

Micron Technologies Utah - Remote: May 2020-August 2020

Process Engineering Intern - RDA: Involved analysis of defects in Klarity software and sourcing them to specific process step, designing experiments and analyzing results in JMP to reduce reliability issue causing defects in specific process steps, and working in a cross-functional team to solve issues.

AWARDS

Kwon Family Scholarship - May 2021: For demonstration of scholastic excellence.

A.R. Buck Knight Award - May 2021: For demonstrating leadership in campus activities, including activities outside the College of Engineering.

Omron Electrical Engineering Scholarship - September 2020: For demonstration of scholastic excellence.

Edward C Jordan Award - May 2020: For distinguishing one's self through their outstanding scholarship and excellence of individual effort in an area of electrical and computer engineering research.

COMMUNITY INVOLVEMENT

HKN Honors Society Board - Urbana, IL: May 2019 - May 2021

Director of Events: May 2020 - May 2021, Director of Initiate Affairs: December 2019 - May 2020

SKILLS

Cleanroom Experience, Device Fabrication, TMD CVD/MOCVD, SEM, FIB, RIE, EDS, TCAD Modeling, Cadence, HSPICE, IC Design Python, System Verilog, JMP, Defect Analysis, Graphic Design, Learning Agility, Leadership, Teamwork, Creativity
