YUAN-CHUN LUO

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RESEARCH INTEREST

Solid state devices

EDUCATION

National Tsing Hua University (NTHU), Hsinchu, Taiwan *sep 2014 - june 2018*
B.S., Electrical Engineering (EE) Overall GPA: 4.06/4.3

PUBLICATION

Zero Hysteresis Negative Capacitance FinFETs. 2018 SSDM (submitted)

· **Y.-C. Luo**, E-R. Hsieh, J.-R. Su, S.S. Chung

DrowsyNET: Convolutional Neural Networks with Runtime Power-Accuracy Tunability Using Inference-Stage Dropout. 2018 VLSI-DAT

· R.-S. Liu, Y.-C. Lo, **Y.-C. Luo**

SELECTED HONOR AND AWARD

2nd place, Project competition with 250 student competitors	EECS, NTHU, 2018
1st place, Project Competition with 100 student competitors	EE, NTHU, 2018
Excellent-EECS student award for top 10% of all students	EECS, NTHU, 2017
Oversea experiencing award, 25% of applicants were approved with USD 3100	EE, NTHU, 2016
Outstanding academic achievement for top 5% of all students	EE, NTHU, 2015

RESEARCH EXPERIENCE

Research Assistant, Emerging Devices and Technology Lab oct 2017 - present
EE, National Chiao Tung University (NCTU), Hsinchu, Taiwan

· Advised by Prof Steve S. Chung.

· Verify RF characteristics for FinFETs using simulation tools, TCAD.

· Measure and derive negative capacitance in FinFETs to maximize the capacitance values and minimize hysteresis that adds complexity into later circuit design.

Research Assistant, THz Optoelectronic Devices Lab june 2017 - june 2018
EE, NTHU

· Advised by prof Shang-Hua Yang.

· Designed THz optoelectronic devices and arrays using the simulation tool, COMSOL Multiphysics, and the software, Matlab.

Research Assistant, SSD LAB sep 2017 - aug 2018
EE, NTHU

· Advised by prof Ren-Shuo Liu.

· Achieved run-time power-accuracy tunability for a low-cost and adaptive Convolutional Neural Net suitable for edge devices with artificial-intelligence (AI) applications.

LEADERSHIP & TEAMWORK

President, Student Association june 2016 - june 2017
EE, NTHU

· Built a 15-student team to receive students and an advisor from City University of Hong Kong.
· Arranged undergraduate-project contests with five professors as judges for over 100 students in EE, NTHU.
· Organized Christmas party for more than 200 students from four different departments.

PROJECT

VLSI, memory system project june 2016
EE, NTHU

· Completed circuit design, pre-sim, layout, and post-sim of a memory system including an inverter chain, a 5-32 decoder, ROM, a sense amplifier, and 10 flip-flops.

Semiconductor Microwave electronic devices june 2016
EE, NTHU

· Investigated into silicon based RF semiconductor devices in recent 10 years.

Computer architecture, assembly code june 2016
EE, NTHU

· Wrote and compared MIPS assembly codes and C++ codes performing iterative method, recursive method, and tail recursion.

Numerical Analysis, RLC circuit june 2017
EE, NTHU

· Solved transient response of a RLC circuit which consists of large and small time constants at the same time.

RELEVANT COURSES

Core Courses	**Other Courses**
ULSI Technology	Numerical Analysis
Semiconductor Microwave Devices	Electromagnetic Waves
Introduction to Solid-State Physics	Feedback Control Systems
Introduction to Solid-State Electronic Devices	Computer Architecture
Introduction to Integrated Circuit Design	Material Science and Engineering

SKILLS

Languages	English(GRE 331, TOEFL 105), and Chinese(Native)
Software Languages	C++, Matlab, and Python
Hardware Languages	Verilog, Hspice, and Laker
Simulation tools	COMSOL Multiphysics 5.3a, and TCAD