YUAN-CHUN LUO

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RESEARCH INTEREST

Solid State Devices

SUMMARY

Multiple award winner in both project contest and academic performance.

Co-author of two research papers finished during undergraduate years.

Leader of student teams to organize student events with more than 200 participants.

EDUCATION

National Tsing Hua University (NTHU), Hsinchu, Taiwan *Sep. 2014 - Jun. 2018*
B.S., Electrical Engineering (EE) Overall GPA: 4.07/4.3

SELECTED HONOR AND AWARD

Champion, Contest of implementation with more than 100 student competitors. *EE, NTHU, 2018*

Runner up, Contest of implementation with more than 250 student competitors. *EECS, NTHU, 2018*

Excellent-EECS student award for top 10% of all students. *EECS, NTHU, 2017*

Oversea exchange student scholarship 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.

· Measure and derive negative capacitance(NC) values in NC FinFETs to further maximize the capacitance values and minimize hysteresis which adds complexity into later circuit design.

· Build C++ codes to efficiently analyze data from measurement.

· Verify RF characteristics for FinFETs using the simulation tool, TCAD.

Research Assistant, THz Optoelectronic Devices Lab *Jun. 2017 - Jun. 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. 2016 - Aug. 2017*
EE, NTHU

· Advised by prof Ren-Shuo Liu.

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

LEADERSHIP & TEAMWORK

President, Student Association *Jun. 2016 - Jun. 2017*
EE, NTHU

· Built a 20-student team to receive students and an advisor from City University of Hong Kong.
· Arranged undergraduate-project contests with six professors as judges for over 100 student participants.
· Organized Christmas party for more than 200 students from four different departments.

PUBLICATION

New Experimental Approaches to Extracting Negative Capacitances of 14nm NC-FinFET in Exploration of Short-channel & Body Effect to Achieve Free Hysteresis.

· 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 COURSE PROJECT

VLSI, Memory System Circuit Design Project *Jun. 2016*
EE, NTHU

· Completed circuit design, pre-sim, layout, and post-sim of a memory system.

Semiconductor Microwave Electronic Devices, Term Paper *Jun. 2016*
EE, NTHU

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

Computer Architecture, Assembly Code Project *Jun. 2016*
EE, NTHU

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

– RELEVANT COURSES

Core Courses	**Other Courses**
ULSI Technology (A+, graduate level)	Numerical Analysis (A)
Semiconductor Microwave Devices (A+, graduate level)	Electromagnetic Waves (A+)
Introduction to Solid-State Physics (A+)	Feedback Control Systems (A+)
Introduction to Solid-State Electronic Devices (A+)	Computer Architecture (A+)
Introduction to Integrated Circuit Design (A+)	Data Structure (A+)

SKILLS

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