

Chad Huard

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Education

Currently Pursuing: PhD in Electrical Engineering – University of Michigan

Scholastic Awards:

- University of Michigan GPA: 4.0
- NSF Graduate Research Fellowship – Honorable Mention 2013 & 2014
- University of Michigan – Rackham Merit Fellowship 2012
- Summa Cum Laude – Wayne State University (WSU), 2012
- Highest Scholastic Average – Junior, ECE WSU 2011
- Undergraduate Research Award – Irvin D. Reid Honors College WSU 2010
- REU in Telematics and Cyber Physical Systems – National Science Foundation 2011
- Department of Chemistry Chair's Honor List, WSU 2009-2010

B.S. in Electrical and Computer Engineering – Wayne State University **12/11**

Primarily focused on electrical systems, embedded systems and solid state engineering.

B.S. in Architecture – Lawrence Technological University **5/03**

Research

I have experience with graphene growth, transfer and characterization. I have been involved in the development of a prototype rapid thermal CVD system for the growth of graphene and carbon nanotubes at the University of Michigan, including being solely responsible for developing and characterizing a graphene growth process.

Publications & Presentations:

- Q. Zhang, Y. Di, **C. Huard**, L.J. Guo, J. Wei and J. Guo, "Highly stable and stretchable graphene-polymer processed silver nanowires hybrid electrodes for flexible displays." *J. Mater. Chem. C* 3, 1528–1536 (2015).
- **C. Huard** †, J. Guo †, Y. Yang, Y.J. Shin, K.T. Lee, and L.J. Guo, "ITO-Free, Compact and Color Liquid Crystal Devices using Integrated Structural Color Filters and Graphene Electrode," *Advanced Optical Materials* 2014
- J.G. Ok, M.K. Kwak, **C. Huard**, H.S. Youn, and L.J. Guo, "Photo-Roll Lithography (PRL) for Continuous and Scalable Patterning with Application in Flexible Electronics," *Advanced Materials*, 2013
- **C. Huard**, et al. "pH Sensitivity of Graphene Edges," presented at Wayne State Undergraduate Research Conference, Detroit, MI, 2011.
- **C. Huard**, et al. "CVD Grown Graphene Field-Effect Transistor Fabrication and Characterization," presented at AVS 38th Spring Symp. on Graphene and Neural Interfaces, Detroit, MI, 2011.
- X. Tan, **C. Huard**, H.-J. Chuang, M.-W. Lin, Z. Zhou, and M. M.-C. Cheng, "Control and enhancement of graphene sensitivity by engineering edge defects," presented at the 2012 IEEE Sensors, pp. 1–4.

- X. B. Tan, J. Yang, P. Zeng, E. G. R. Kim, **C. Huard**, and M. M. C. Cheng, “Electrowetting on flexible, transparent and conducting single-layer graphene,” presented at the 2012 IEEE 25th International Conference on Micro Electro Mechanical Systems (MEMS), pp. 1037–1040.

†Authors contributed equally to this work

Previous Work Experience

Graduate Student Instructor EECS 314– University of Michigan

W15

GSI for EECS 314: Circuits for non-majors. Responsible for teaching discussion and lab classes. Prepared discussion materials and held office hours for one-on-one instruction.

Software Validation Project Lead – Autoliv, Southfield MI

2/12 – 8/12

Responsible for designing software validation test coverage and oversight of test execution for embedded airbag and brake control modules. Involved with designing automated hardware-in-the-loop tests and hardware.

Research Assistant – Dr. Mark Ming-Cheng Cheng, ECE Dept. WSU

9/10 – 12/11

Designed and conducted experiments involving the growth and characterization graphene, a newly discovered 2-dimensional form of carbon. Focused on evaluating graphene’s potential uses as a biosensing platform. Experience with cleanroom protocols and procedures.

Owner / Operator – CMH Imaging Photography Studio, Dexter MI

6/07 – 2/09

Owned and operated a retail photography studio in downtown Dexter, MI. Responsible for photographic and business administration duties.

Industrial Designer – Total Vinyl Products, Ypsilanti MI

8/05 – 6/07

Designed custom pool products. Experienced with fast paced, manufacturing environment. Worked in 3d using AutoCAD and proprietary drafting software