

Nicole Chan

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EDUCATION

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

M.S. ELECTRICAL AND
COMPUTER ENGINEERING

Expected May 2017

GPA: 3.26/4.00

UNIVERSITY OF ARIZONA

B.S. ELECTRICAL AND
COMPUTER ENGINEERING

May 2015 | GPA: 3.72/4.00

Magna Cum Laude

Minors in Mathematics,

Aerospace Engineering, and

Mechanical Engineering

SKILLS

C/C++ • Python • R • MATLAB •
C2E2 • SpaceX • ROS • OpenCV
• OrCAD Capture & PSpice •
MCUs (Arduino & PIC) •
Soldering & electronics lab
equipment

MECHANICAL

Solidworks • AutoCAD • CNC
mills • Manual mills & lathes

RELEVANT COURSEWORK

GRADUATE

-Embedded Systems
-Control Systems Theory
-Embedded & Cyberphysical
Systems Verification
-Distributed Algorithms
-Random Processes

UNDERGRADUATE

-Digital Control Systems
-Automatic Control
-Computational Techniques

LEADERSHIP & SERVICE

GRADSWE (PUBLICITY COMMITTEE MEMBER)

Fall 2016 - present

UA IEEE STUDENT BRANCH (CHAIR/VICE CHAIR)

Fall 2012 - Spring 2015

ARIZONA SOLAR RACING TEAM

Fall 2012 - Fall 2013

EXPERIENCE

GRADUATE RESEARCH ASSISTANT | DEPT. OF ELECTRICAL AND COMPUTER
ENGINEERING, UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

August 2015 - present | Urbana, IL

- Advised by Dr. Sayan Mitra.
- Investigating formal verification of optimal control schemes, such as MPC.
- Applying verification techniques to variations of a benchmark autonomous satellite rendezvous and docking problem.
- Building a ROS-based ground vehicle platform that will employ a high-level robotic programming language framework for distributed applications.

SPACE SCHOLAR INTERN | AIR FORCE RESEARCH LABORATORY

June - August 2016 | Albuquerque, NM

- Verified passive safety of constrained control for an autonomous satellite rendezvous operation.

UNDERGRADUATE LAB ASSISTANT | DEPT. OF ELECTRICAL AND COMPUTER
ENGINEERING, UNIVERSITY OF ARIZONA

January 2013 - December 2014 | Tucson, AZ

- Instructed undergraduates about C/C++ programming concepts during lab hours.

ELECTRICAL ENGINEERING INTERN | ATHENA WIRELESS COMMUNICATIONS

June - December 2014 | Surprise, AZ

- Drew electrical schematics for a 60GHz backhaul radio unit design.

CAT VEHICLE REU STUDENT RESEARCHER | UNIVERSITY OF ARIZONA

June - August 2013 | Tucson, AZ

- Generated a model of an autonomous vehicle's behavior with respect to steering command inputs, and used the model to improve a MATLAB vehicle simulation.

PROJECTS

F1/10 AUTONOMOUS RACE CAR

Fall 2016 | University of Illinois at Urbana-Champaign

- Assembled a modified hobby racecar and programmed object tracking/following.

LASER RANGEFINDER (SENIOR CAPSTONE PROJECT)

Fall 2014 - Spring 2015 | University of Arizona and Texas Instruments

- Served as Team Lead for six team members from multiple disciplines.
- Prototyped a tool to measure distances using optical time-of-flight data.

MICROMOUSE (STUDENT CLUB PROJECT)

Fall 2014 | UA IEEE Student Branch | University of Arizona

- Mentored freshmen in building a robotic mouse to navigate a physical maze.

PATH-FOLLOWING ROBOT (MICROCONTROLLERS COURSE PROJECT)

Spring 2014 | University of Arizona

**ENVISION (ENGINEERS VOLUNTEERING IN STEM
EDUCATION)**

Fall 2016 - present

IEEE-HKN IOTA XI CHAPTER (SECRETARY)

Fall 2014 - Spring 2015

UA HONORS COLLEGE EXTREME DISCOVERY TEAMS

Fall 2011 - Spring 2013