

# Benjamin Andrew Cyr

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## EDUCATION

2018 – Now **Ph.D. in Computer Science**  
*Second Year*  
*University of Michigan*  
*Ann Arbor, MI*  
*GPA: 4.00/4.00*

2013 – 2017 **Bachelor's of Electrical Eng. (Computer Option)**  
*Auburn University*  
*Auburn, AL*  
*GPA: 3.98/4.00*

## INDUSTRY EXPERIENCE

MAY 2016 – AUGUST 2016

ADTRAN Inc. – Huntsville, AL

### Network Driver Development

Software development of custom network driver on proprietary ADTRAN equipment.

AUGUST 2015 – DECEMBER 2015

ADTRAN Inc. – Huntsville, AL

### Design Verification Testing

Wrote automated "smoke checks" in python to test functionality of new software releases on ADTRAN Management and Switch Modules.

JANUARY 2015 – MAY 2015

ADTRAN Inc. – Huntsville, AL

### Sys. Design and Ver. Testing

Cooperative experience. Performed routine tests of ADTRAN and Cisco devices using CLI and proprietary GUIs.

MAY 2014 – AUGUST 2014

SAIC – Huntsville, AL

### Private Network Administration

Maintained devices on a private network of helicopter simulators.

## ENGINEERING EXPERIENCE

JANUARY 2014 – MAY 2018

Auburn University – Auburn, AL

### AU Small Satellite Program

Member of Electrical Power System Team in student-managed CubeSat program. Managing and teaching a team of younger students to build and test embedded systems.

## RESEARCH EXPERIENCE

JUNE 2018 – NOW

University of Michigan – Ann Arbor, MI

### Cyber-Physical Security Research

Advisor: Dr. Kevin Fu. Researching defenses against light-based attacks on microphones in voice-controllable systems and spoofing attacks on LiDAR sensors used in autonomous vehicles.

JANUARY 2018 – MAY 2018

Auburn University – Auburn, AL

### Hardware Security Research

Advisor: Dr. Ujjwal Guin. Proposed a new theoretical defense to prevent firmware extraction attacks in low-cost embedded systems.

AUGUST 2017 – MAY 2018

Auburn University – Auburn, AL

### Networking Optimization Research

Advisor: Dr. Yin Sun. Constructed MATLAB simulations for optimizing the age of information in real-time networks.

MAY 2017 – JULY 2017

Hochschule Mannheim – Mannheim, Germany

### Embedded Systems Research

Advisor: Prof. Dr. Walter Götzmann. Developing a system to measure and display data from an electronic bike using an AVR microcontroller.

## PUBLICATIONS

**Adversarial Sensor Attack on LiDAR-based Perception in Autonomous Driving.** Y. Cao, C. Xiao, B. Cyr, Y. Zhou, W. Park, S. Rampazzi, Q.A. Chen, K. Fu, Z.M. Mao. ACM CCS 2019.

**Low-Cost and Secure Firmware Obfuscation Method for Protecting Electronic Systems from Cloning.** B. Cyr, J. Mahmood, U. Guin. IEEE IoT Journal 2019.

**Information Aging through Queues: A Mutual Information Perspective.** Y. Sun, B. Cyr. IEEE SPAWC 2018.

## SELECTED SKILLS

GOOD LEVEL C, C++, Python, FreeRTOS, Ubuntu, RHEL, Microcontrollers (STM, AVR, NXP, TI)

INTERMEDIATE VHDL, MATLAB, Windows, Soldering, Autodesk EAGLE

BASIC LEVEL Java, Verilog, Labview, Microsoft Office, LaTeX