

**Travis W. Peters** | Assistant Professor, Gianforte School of Computing, Montana State University, Bozeman, MT  
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## CURRENT APPOINTMENTS

**Assistant Professor**, Gianforte School of Computing, Montana State University

August 2019 - Present

## EDUCATION

**Ph.D., Computer Science**

2013 - 2019

Dartmouth College, Hanover, NH

Dissertation Title: "[Trustworthy Wireless Personal Area Networks](#)"

**B.S., Mathematics & Computer Science**

2008 - 2012

Western Washington University (WWU), Bellingham, WA

## INDUSTRY & RESEARCH EXPERIENCE

**Assistant Professor**, Montana State University

August 2019 - Present

- Collaborate with multidisciplinary teams to research a variety of topics, including: issues in software and network security, and developing teaching curriculum for computing in K-12 and undergraduate classes.
- Lead a group of graduate and undergraduate student researchers focused on issues in computer and network security.
- Teach undergraduate and graduate courses in [operating systems](#) and [computer and network security](#).

**Research Assistant**, Dartmouth College

January 2014 - August 2019

- Collaborate with multidisciplinary teams to research security and privacy threats in mobile health (mHealth).
- Achieve security through the design and experimental validation of hardware and software architectures.
- Investigate how to apply machine learning and anomaly detection to detect malicious or errant devices in networks of wireless devices by developing models based on historical network traffic and conducting comparative analysis.

**Security Research Intern**, Intel Labs

2015, 2016

- Conducted a survey on security and privacy threats in the Internet of Things (IoT). Presented findings to researchers and product groups; aided team in developing a larger IoT security research agenda.
- Designed and implemented a security architecture to enhance Bluetooth security on Intel platforms.
- Published and presented our work in [HASP'18](#) and have since been granted a related patent ([BT-TIO patent'19](#)).

**DevOps Engineer**, Attachmate

January 2013 - August 2013

- Designed and implemented an automated VM template management infrastructure using Chef and VMware's vCloud Director to automate how VMs running various OSs are deployed and maintained (patched & updated).
- Developed automation routines in Ruby, Bash, and Batch (install software, configure machine settings, etc.).
- Wrote and maintained design specifications and unit tests.

**Software Engineer Intern**, Attachmate

August 2012 - December 2012

- Extended Luminet (enterprise fraud management system) to integrate with various Security Information & Event Management (SIEM) systems. The extensions used our customizable XML configuration file to enable network operators to configure Luminet to log to various SIEMs.
- Demonstrated correctness of code through implementation of unit tests & automated testing methods.

**Mobile Developer & Intern Team Lead**, Emergency Reporting

January 2012 - June 2012

- Designed and implemented a mobile application to aid Fire/Rescue and EMS responders.
- Led team of four interns to implement compatible mobile application on iOS and Android platforms.
- Implemented data security (at-rest and in-transit), database access, and integration with Google Maps.

## SELECTED PROJECTS

**IoT Security** (2015-present). Innovative security solutions in IoT systems and networks. Concentrations in novel security applications in Bluetooth, Wi-Fi, and SGX for consumer devices [[REU'2020](#), [MobiCom'19](#), [MobiSys'19](#), [BT-TIO patent'19](#), [HASP'18](#)]. Technologies: C, Python, Jupyter Notebooks, Linux, Android, BlueZ, USRP & GNU Radio

**Amulet** (2014-2016). Custom mobile health device built for security and low-power operation. Published papers in [SenSys'16](#), and [WM-MADD'14](#) and open-sourced our system ([Amulet on GitHub](#)). Technologies: C, Java, Javascript; custom HW and OS built on QP RTOS.

## TECHNICAL SKILLS

**Programming Languages:** Python, C, Java, x86 assembly, Bash, Ruby, LaTeX, HTML/CSS, Javascript. **Software Dev. & Prototyping:** Linux, Android, OSX, iOS; Linux and Android Bluetooth stacks; Raspberry Pi, Arduinos, and other custom HW platforms (e.g., Amulet); Git; Vagrant, Docker, Chef. **System & Software Analysis:** software analysis: static analysis (e.g., objdump, binary ninja), dynamic analysis (e.g., gdb, strace, ptrace, perf); hardware & wireless analysis: e.g., oscilloscopes, spectrum analyzers. **Data Collection & Analysis:** Wire-shark, GNU Radio, Jupyter, MATLAB. **Wireless and Software Defined Radios (SDRs):** Ellisys Bluetooth Analyzer, Ubertooth, USRP, GNU Radio. **Databases & Web Frameworks:** MySQL, MongoDB; Node.js, Bootstrap.

## AWARDS, LEADERSHIP, AND VOLUNTEER EXPERIENCE

- Co-PI on DHS award for cybersecurity research (\$3,100,000)** 2020 - Present
- Co-PI on NSF grant for research and outreach in K-12 computing research and education (\$654,255)** 2020 - Present
- Solo PI on MSU Open Educational Resources Initiative award to support undergraduate security courses (\$6,319)** 2021
- Hacker Cats Faculty Advisor**, Montana State University 2020 - Present
- Research Advisor**, Montana State University 2019 - Present
- Volunteer Assistant Coach (Couch-to-5k, High School)**, Hanover, NH 2016 - 2019
- Teaching Award**, Dartmouth College 2013, 2014, 2015
- Vice President of Business & Operations**, Associated Students of WWU 2011 - 2012
- Outstanding Winner, Frank Giordano Award**, Contest in Mathematical Modeling 2012