

# Cody Trevillian

Department of Physics

Oakland University

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## EDUCATION

### Oakland University

Auburn Hills, MI

**Ph.D., Applied & Computational Physics** | GPA: 4.0

Expected: April 2022

Research Focus: Magnetism & Spin Dynamics Simulations, Theory, Experimental Design & Implementation

**M.S., Physics** | GPA: 4.0

April 2019

Research Interests: Condensed Matter Physics, Magnetization and Spin Dynamics, Spintronics, Quantum, Physics Education

### Michigan Technological University

Houghton, MI

**B.A., Physics** | Minor in Plant Sciences

April 2016

### Responsibility Conduct Training:

Responsible Conduct of Research Training, Collaborative Institute Training Initiative (CITI)

### Languages:

English, Native Speaker

German, Limited Working Proficiency (Written)

Spanish, Limited Working Proficiency (Written)

Russian, Limited Working Proficiency (Written)

## RESEARCH

### Oakland University

Auburn Hills, MI

#### Institute for Spintronics and Microwave Technology

Graduate Research Assistant, Department of Physics

January 2018–Now

- Produced novel theoretical numerical computations of transverse spin current
- Updated and expanded applicability of Mathematica program
- Created graphics and data sets for use in international conferences
- Prepared manuscript for publication

Advisors: Dr. Andrei Slavin & Dr. Vasyl Tyberkevych

### Michigan Technological University

Houghton, MI

Undergraduate Research Assistant, Department of Physics

June 2011–August 2012

- Verified the accuracy and viability of the CRYSTAL09 solid state physics computational tool
- Programmed possible crystal unit cell files on the CRYSTAL09 computational program
- Remotely tested the unit cells under a variety of parameters using the RAMA supercomputer cluster
- Updated and modernized existing online research paper database for the leading researchers
- Compiled relevant scientific literature using EndNote

Advisor: Dr. Ravindra Pandey

## PAPERS & PRESENTATIONS

**C.A. Trevillian**, V. Tyberkevych, and A. Slavin. "Calculation of transverse spin currents caused by spin waves propagating along an obliquely magnetized magnetic film" *2019 Graduate Student Research Conference at Oakland University*, March 2019.

**C.A. Trevillian** and V. Tyberkevych. “Transverse spin currents carried by surface spin waves in obliquely magnetized magnetic films.” *APS March Meeting*, March 2019.

## TEACHING

Oakland University Department of Physics Auburn Hills, MI  
**PHY 1200 Graduate Teaching Assistant** September 2017–December 2018  
**Lead/Sole TA**

*The Physics of Everyday Life*

Oakland University Department of Physics  
**PHY 1100 Graduate Teaching Assistant** May 2018–June 2018  
*General Physics Lab I*

Michigan Technological University Department of Physics Houghton, MI  
**Educational Demonstrator** August 2010–May 2014  
*(10) semesters*

## PROFESSIONAL HISTORY

**Graduate Research Assistant**, Oakland University, Auburn Hills, MI January 2018–Now  
 • Updated and used Mathematica program to study transverse spin currents in thin magnetic films

**Graduate Teaching Assistant**, Oakland University, Auburn Hills, MI May 2018–June 2018  
 • Taught and graded for two sections of PHY 1100, General Physics Lab I

**Graduate Teaching Assistant**, Oakland University, Auburn Hills, MI September 2017–December 2018  
 • Organized student laboratories and lecture demonstrations for PHY 1200, The Physics of Everyday Life  
 • Assisted in the development of course materials by creating new lab write-ups and lecture demonstrations

**Physics Lab Technician**, Oakland Community College, Waterford, MI June 2017–January 2018  
 • Coordinated student laboratory setups while providing lecture demonstrations

**Physics Lab Assistant**, OCC contracted through Kelly Services, Waterford, MI February 2017–June 2017  
 • Coordinated student laboratory setups while providing lecture demonstration

**Educational Demonstrator**, MTU Physics Department, Houghton, MI August 2010–May 2014  
 • Maintained and operated laboratory and demonstration equipment for student labs and during lectures

## OUTREACH EXPERIENCE

**Family Physics Night** Spring 2011, 2012, 2013, 2014  
 Western U.P. Center for Science, Mathematics, and Environmental Education  
 Society of Physics Students – Michigan Technological University Chapter

## PROFESSIONAL AFFILIATIONS

**Member**, Society of Physics Students Fall 2010–Now  
**Member**, American Association of Physics Teachers Fall 2018–Now  
**Member**, American Physical Society September 2018–Now  
**Member**, IEEE April 2019–Now  
**Member**, IEEE Magnetics Society April 2019–Now

## ACADEMIC HONORS AND PROGRAMS

**GReAT Award (2019)**

Oakland University

**Graduate Assistantship (2017-2018)**

Oakland University

**Presidential Scholar of Distinction (2010)**

Michigan Technological University

**Michigan Competitive Scholarship (2010)**

State of Michigan

**Michigan Promise Scholarship (2010)**

State of Michigan

**Anthony Mileski Memorial Scholarship (2010)**

Rochester High School

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**TECHNICAL SKILLS**

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•Adobe Suite	•MS Suite	•G Suite	•OpenOffice
•Blender	•Finalcut Pro	•Photoshop	•GIMP
•Endnote	•Linux	•Mac OSX	•Windows
•CRYSTAL09	•LATEX	•MATLAB	•Mathematica