
Tyler C. Godat : Curriculum vitae : <tgodat@ur.rochester.edu>

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CAREER ASPIRATIONS

Upon completion of a PhD in Optics, I want to apply my knowledge and expertise to meaningful research in a highly specialized field and eventually teach at the University level or work in the optics industry.

EDUCATION

University of Rochester, Institute of Optics

2016-present

- Optics PhD program
- Sproull Fellowship

Rochester Institute of Technology

2012-2016

- B.S. in Physics and Applied Mathematics with a minor in Spanish, Summa cum laude.
- 2015 Barry Goldwater Scholarship recipient.
- Sigma Pi Sigma Physics Honors Society.
- RIT Honors Program.
- RIT Research Scholar.
- RIT President's Scholarship.
- RIT Outstanding Undergraduate Scholar Award.

EXPERIENCE

University of Rochester

2017-present

Graduate Student Researcher

- Advisee to Dr. David Williams in the Advanced Retinal Imaging Alliance as part of the Center for Visual Science.
- Work using AOSLO to image macaque monkey retinas, especially using fluorescence from calcium indicators to image ganglion cells.
- TA for OPT-461: Fourier Optics (Fall 2017) and OPT-448: Vision and the Eye (Spring 2018).
- Student mentor for ten-week REU program run by the Optics department (Summer 2018).

University of Rochester/Rochester Institute of Technology

Summer 2016

Research Associate

- Collaborated with Optics group of Dr. Mishkat Bhattacharya (RIT) and Optics group of Dr. Nick Vamivakas (UR).
- Utilized existing MATLAB code in order to model optical tweezing and optical traps.

University of Rochester

Summer 2015

Physics REU

- Worked with the Quantum Optics research group of Dr. Robert Boyd.
- Theoretical propagation of modes for use in a QKD system.

Rochester Institute of Technology

2012-2015

Research Associate

- Research with Optics group of Dr. Mishkat Bhattacharya.
- Responsible for developing an optical ray-tracing program in Mathematica.
- Two 10-week summer programs in addition to research during the school year.

Rochester Institute of Technology

2013-2016

Teaching Assistant

- PHYS-365: Physical Optics: Spring 2016
- PHYS-212: University Physics II: Spring 2016, Fall 2014, Fall 2013.
- PHYS-112: College Physics II: Fall 2015, Spring 2015.
- PHYS-211: University Physics I: Fall 2015, Spring 2014.

Grader

- PHYS-213: Modern Physics I: Fall 2015
- MATH-251: Probability and Statistics I: Spring 2015 (two sections), Fall 2014.
- MATH-185: Mathematics of Graphical Simulation I: Spring 2015.
- MATH-219: Multivariable Calculus: Fall 2014.

PUBLICATIONS: ARTICLES IN PEER-REVIEWED JOURNALS

1. J.E. McGregor, L. Yin , Q .Yang, **T. Godat**, K.T. Huynh , J. Zhang, D.R. Williams, and W.H. Merigan, "Functional architecture of the foveola revealed in the living primate", PLOS ONE **13(11)**: e0207102 (2018).
2. M. Eggleston, **T. Godat**, E. Munro, M. A. Alonso, H. Shi and M. Bhattacharya, "Ray transfer matrix for a spiral phase plate", Journal of the Optical Society of America A **30**, 2526-2530 (2013).

PRESENTATIONS: TALKS, POSTERS, WORKSHOPS AND CONFERENCES

1. "*In vivo* classification of macaque foveal ganglion cells through optical recording of responses to chromatic and luminance flicker", Association for Research in Vision and Ophthalmology Annual Meeting, Vancouver, April 2019.
2. "Quantum communication with Alice and Bob", Rochester Symposium for Physics Students, University of Rochester, April 2016.
3. "Quantum communication with Alice and Bob", REU Summer Undergraduate Symposium, University of Rochester, July 2015.
4. "The spiral phase plate: an optical analysis", SPIE OSA Student Talk Competition (2nd Place), Rochester Institute of Technology, November 2014.
5. "Location-Based Mobile Games for Language Education", New York State Association of Foreign Language Teachers (NYSALFT) Annual Conference, Rochester NY, October 2014.
6. "Ray Transfer Analysis of the Spiral Phase Plate", 40th Annual Fall Scientific Paper Session, Rochester Academy of Science, Nazareth College, November 2013.
7. "Ray Transfer Analysis of the Spiral Phase Plate", College of Science Undergraduate Seminar, Rochester Institute of Technology, September 2013.
8. "Ray Transfer Analysis of the Spiral Phase Plate", Undergraduate Research Symposium, Rochester Institute of Technology, August 2013.