# Fiona Nichols-Fleming

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**EDUCATION**

**University of Rochester**, Rochester, NY
*Bachelor of Science*, Physics and Astronomy     Anticipated May 2019
*Minor*, Mathematics     GPA: 3.96

**RESEARCH EXPERIENCE**

**REU Intern**
Summer 2018     The SETI Institute
Investigating the crystallinity of the Mid-Sized Moons of Saturn based on asymmetry in the 2um spectral ice band and its implications for activity, formation and aging with Cristina Dalle Ore through an NSF funded Research Experience for Undergraduates (REU).

**Research Assistant**     Department of Physics and Astronomy
Fall 2017 - Present     University of Rochester
Studying of the evolution of X-ray emissions in sun-like stars including an attempt to relate sunspot coverage to X-ray emissions and the use of an existing model to increase understanding of the behavior of older stars with Prof. Eric Blackman in the form of an Independent Study.

**REU Intern**     Center for Astrophysics and Planetary Science
Summer 2017-Present     Cornell University
Tracking the latitudinal and seasonal variations in the haze distribution of Titan's atmosphere using the PyDISORT radiative transfer model with Prof. Alex Hayes through an NSF funded Research Experience for Undergraduates (REU). Work is continuing throughout the academic year.

**Research Assistant**     Department of Physics and Astronomy
Fall 2016 - Spring 2017     University of Rochester
Simulating and studying the tidal evolution of satellites under Prof. Alice Quillen. Specific projects include the high obliquities of Pluto's smaller satellites and the dissipation of energy in a tidally evolving satellite.

**PUBLICATIONS**

**Fiona Nichols-Fleming**, Paul Corlies, A. G. Hayes, M. Ádámkovics, "Tracking Short-Term Variations in Titan's Haze Distribution with SINFONI VLT," in prep.

**Fiona Nichols-Fleming**, Eric G. Blackman, "Observational Determination of Starspot Covering Fraction as a function of Stellar Age," in prep.

Alice C. Quillen, **Fiona Nichols-Fleming**, Yuan-Yuan Chen, Benoît Noyelles, "Obliquity evolution of the minor satellites of Pluto and Charon", Icarus 293, 94-113, 2017.

**RESEARCH TALKS**

**Nichols-Fleming** and Blackman, "Constraining Spot Coverage as a Function of Age in Main-Sequence Stars", University of Rochester Undergraduate Research Exposition, talk, 2018.

**Nichols-Fleming**, Corlies, Hayes, Ádámkovics, "Tracking Short-Term Variations in Titan's Haze Distribution", LPSC Meeting 49, talk, 2018.

**Nichols-Fleming**, Corlies, Hayes, Ádámkovics, "Tracking Short-Term Variations in Titan's Haze Distribution with SINFONI VLT", CUWiP at RIT, talk, 2018.

**Nichols-Fleming**, Corlies, Hayes, Ádámkovics, "Tracking Short-Term Variations in Titan's Haze Distribution with SINFONI VLT", Titan Surface Meeting, talk, 2017.

| **CONFERENCES ATTENDED** | Conference for Undergraduate Women in Physics (CUWiP) at Harvard | January 13-15, 2017 |
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**LEADERSHIP EXPERIENCE**

**Advisory Group Member** — Physics Optics Astronomy Library
Fall 2017 - Present — University of Rochester
The POA Advisory Group is a way to connect the administrative aspects of the library to the student body it serves. As a member, I take part in the meetings that occur a few times each semester, communicate upcoming changes in the library to students, and communicate students' concerns to the library staff.

**President** — Astronomy Club
Fall 2017 - Spring 2018 — University of Rochester
Makes major decisions for the club and decides its direction for the year. I sign off on all major events, delegate coordination of events, and am involved in most of the logistics and planning for everything that happens within the club.

**Business Manager** — Astronomy Club
Fall 2016 - Spring 2017 — University of Rochester
Managing all the financial forms and accounts for the club including: requesting purchase orders for events, planning the budget, meeting with the SA accountant for the club, and meeting with the account managers in the physics department.

**Co-Instructor** — Pre-College Experience in Physics
Summer 2016 — University of Rochester
Designing an introductory level physics curriculum, teaching basic physics concepts to high school girls, and organizing educational field trips and guest lectures.

**TEACHING EXPERIENCE**

**Volunteer Tutor** — Department of Physics and Astronomy
Fall 2016 - Present — University of Rochester
Hold a two hour per week tutoring session to work with students on problem solving skills and various physical concepts

**Workshop Leader** — Department of Computer Science
Fall 2016 — University of Rochester
CSC 161: Intro to Programming
Hold a weekly 75 minute workshop, responsible for grading quizzes

**WORK EXPERIENCE**

**Desk Attendant and Shelver** — Physics Optics and Astronomy Library
Fall 2017 - Present — University of Rochester
Staffing public desk, providing circulation and reference assistance. Performing routine clerical duties and answering the phone. Requires occasional performance of duties such as, enforcement of library rules and policies and shelving and arranging library materials. Some shifts responsible for the opening of the POA Library.

**Processing Clerk II** — University Archives
Fall 2016 - Spring 2017 — University of Rochester
Processing the papers of University of Rochester economics professor Walter Oi. The collection contains about 30 record boxes of material to be organized, rehoused, and described in a new finding aid.

**Processing Clerk** — University Archives
Fall 2015 - Fall 2016 — University of Rochester
Organizing unprocessed University Archives materials, creating inventories and finding aids for materials and collections, creating and applying box and folder labels, occasional staffing of the department reception desk.

| **AWARDS** | **Dean's Award for Symposium Presentation** | Spring 2018 |
| | **Goldwater Honorable Mention** | Spring 2018 |
| | **Dean's Scholarship** | Fall 2015 - Spring 2019 |
| | **Dean's List** | Fall 2015 - Present |

**PROFESSIONAL MEMBERSHIPS**
American Astronomical Society (AAS)
American Physical Society (APS)
Sigma Pi Sigma, National Physics Honor Society
Sigma Xi, the Scientific Research Honor Society

**COMPUTER SKILLS**
**Languages**: Python, Java, C, IDL, LaTeX
**Programs**: Mathematica, Capstone, IgorPro, SAOImage DS9
**Operating Systems**: Mac OSX, Windows, Linux, Android