

ALEXANDER A. MASSOUD

amassoud@ithaca.edu

EDUCATION

B.A., Physics, *Summa cum Laude*, Ithaca College August 2016 - May 2020
Minors in English and Mathematics Overall GPA: 3.95/4.0
Thesis Title: ‘Analysis and Computer Modeling of H_2 Emission from the SMC’

PROFICIENCIES

Computer Languages	Python (<i>Matplotlib</i> , <i>NumPy</i> , <i>Astropy</i> , <i>specutils</i>), IDL
Software & Tools	LaTeX, PostgreSQL, SExtractor, Cloudy, Spextool

RESEARCH EXPERIENCE

Undergraduate Researcher January 2017 - Present
Ithaca College

- **Processed and analyzed spectra** obtained with a professional research telescope.
- **Wrote Python routines** to derive physical results from research-telescope data.
- **Completed Senior Thesis** to communicate work with academic peers.

NSF REU Researcher May - August 2019
Maria Mitchell Association, Nantucket

- **Presented research progress** in weekly meetings with peers and professional mentor.
- **Led outreach** at twice weekly observation nights for community members.
- **Presented poster at professional conference** to communicate research-results.

TEACHING EXPERIENCE

Spring 2020	Teaching Assistant , Ithaca College <i>Stars, Galaxies, and the Universe (Astronomy, algebra-based)</i>
Fall 2019	Teaching Assistant , Ithaca College <i>Solar System Astronomy (Astronomy, algebra-based)</i>
Spring 2019	Teaching Assistant , Ithaca College <i>Solar System Astronomy (Astronomy, algebra-based)</i>
Fall 2018	Teaching Assistant and Tutor , Ithaca College <i>Stars, Galaxies, and the Universe (Astronomy, algebra-based)</i> Tutor , Ithaca College <i>Physics Peer-Led Group Learning Sessions (PLuGs)</i>
Fall 2017	Teaching Assistant , Ithaca College <i>Physics of Human Movement (Mechanics, algebra-based)</i>

OTHER EXPERIENCE

NSF GRFP Proposal Writing 2020
The University of Denver

- **Wrote personal and research statement** for competitive federal grant.

Astronomy Club Founder and Vice-President Fall 2019 and Spring 2020
Ithaca College

- **Founded club** to increase student engagement with on-campus observatory.
- **Organized lectures** on astronomy-topics for college students.

ALMA Cycle 5 Proposal Writing 2018
Ithaca College

- **Wrote scientific and technical proposal** for observation time at research-telescope.

RELEVANT COURSES

Advanced Physics Courses

Classical Mechanics
 Atomic & Molecular Physics
 Electricity and Magnetism
 Math Methods of Physics

Other Relevant Courses

Senior Thesis
 Probability
 Linear Algebra
 Calculus I-IV

PRESENTATIONS

Massoud, A. A., and L. King. *Identifying Strong Lensing Images in the Unusual Merging Cluster Abell 2146*. Presented at the 235th American Astronomical Society (AAS) conference (poster presentation).

GRANTS AND AWARDED FUNDS

Travel Authorization, 01/19

Awarded by Ithaca College to fund travel to the 235th AAS conference.

Award amount: **\$1,779.02**

HONORS AND AWARDS

Spring 2020	Outstanding Teaching Assistant Award , Ithaca College
Fall 2019	Ramanujan Award in Mathematics , Ithaca College
Summer 2019	NSF REU Internship , Maria Mitchell Association, Nantucket
Summer 2018	Summer Scholars Program , Ithaca College
Spring 2018	Outstanding Teaching Assistant Award , Ithaca College
Fall 2017	Newton Award in Mathematics , Ithaca College
	The Oracle Honor Society , Ithaca College
2016-2020	President's Scholarship , Ithaca College
	Dean's List , Ithaca College (Every semester)

PROFESSIONAL AFFILIATIONS

Phi Kappa Phi (National honor society), *Sigma Pi Sigma* (Physics honors society), *Sigma Tau Delta* (English honors society), *Sigma Xi* (Scientific Research Honor Society), American Astronomical Society

PUBLICATIONS IN STUDENT MAGAZINES

Massoud, Alexander 2020, “Deriving,” poem accepted for publication in *Rainy Day*, a Cornell University literary magazine.

Massoud, Alexander 2020, “Spoken Swarm,” poem accepted for publication in *Zoetic*, an Ithaca College *Sigma Tau Delta* magazine.

Massoud, Alexander 2019, “Breed Registry,” poem published in *Stillwater Magazine*, an Ithaca College art and literary magazine.

Massoud, Alexander 2018, “Water, Water Everywhere: Form in the black maria,” published on website for *Stillwater Magazine*.