

ISABELLA G. COX
Rochester Institute of Technology
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EDUCATION

Brighton High School

September 2012 - June 2016

Regents Diploma with Mastery in Mathematics

Rochester Institute of Technology (RIT)

August 2016 - May 2020

B.S. Physics; Anticipated Astronomy Minor, ASL Deaf Studies Immersion
Honors Program

RESEARCH EXPERIENCE

Performed a multiwavelength analysis of a sample of Brightest Cluster Galaxies. Analysis included working with spectroscopic and photometric data to extract star formation rates and other properties of galaxies. Mentored by Dr. Stefi Baum and Dr. Chris O'Dea (2014-2016).

Modeled stellar populations of star-forming lenticular galaxies using full spectrum fitting. Independently designed project (2014-2015).

Designed and implemented Python program to classify a list of galaxies inputted by coordinates using spectral emission line features from spectroscopy taken as part of the Sloan Digital Sky Survey. Independently designed project (2015-2016).

Wrote pipeline script to reduce multi-object spectroscopic data from the Gemini North Telescope to measure redshifts of observed galaxies. Currently flux calibrating the spectra to perform scientific analysis using emission line fluxes. Additionally, worked with spectroscopy data from the Subaru Telescope in an effort to extract signals to measure diagnostic emission lines of sources. Mentored by Dr. Jeyhan Kartaltepe (2017 - ongoing).

Participant for Summer 2018 REU at RIT. Mentored by Dr. Jeyhan Kartaltepe and worked on continuation of prior research (Summer 2018).

PUBLICATIONS

Star Formation in Intermediate Redshift $0.2 < z < 0.7$ Brightest Cluster Galaxies. Cooke, K. C., O'Dea, C. P., Baum, S. A., Tremblay, G. R., **Cox, I. G.**, Gladders, M. D., 2016, ApJ, 833, 224-234.

PRESENTATIONS

Brightest Cluster Galaxies Identified as Possibly Undergoing Star Formation. RIT Undergraduate Research Symposium (August 2014).

The Stellar Population of Star-Forming Lenticular Galaxies. New York State Science Congress (May 2015).

ELF: A Python Program to Extract Information from Optical Emission Line Fluxes. New York State Science Congress (June 2016).

ELF: A Python Program to Extract Information from Optical Emission Line Fluxes. RIT SPIE Student Talks. 2nd Place. (March 2017).

Reduction and Analysis of GMOS Spectroscopy. RIT Undergraduate Research Symposium (August 2018).

Reduction and Analysis of GMOS Spectroscopy for Herschel Sources in CANDELS. The Universe by the Light of CANDELS: Past at Future at UMASS Amherst (October 2018).

Reduction and Analysis of GMOS Spectroscopy for Herschel Sources in CANDELS. The Universe by the Light of CANDELS: Past at Future at UMASS Amherst (October 2018).

TEACHING EXPERIENCE

Teaching Assistant for University Astronomy at RIT, working with professor Andrew Robinson (Fall 2018).

AWARDS

RIT Computational Medal Scholarship (2015).

Second place award for presentation given at RIT SPIE Undergraduate Talks (March 2017).

RIT Physics Achievement Award (Spring 2018).

Full scholarship and acceptance to 2018 *La Serena Astronomy Data School* in Chile (unable to attend).

SERVICE

Member of Local Organizing Committee and Volunteer for RIT Hosted *Conference for Undergraduate Women In Physics*. (August 2017 - January 2018).

Panelist on REU Bootcamp presentation hosted by Women in Science at RIT.

SKILLS

Computational Skills: Python (Advanced Proficiency); IRAF (Moderate Proficiency); IDL (Basic Proficiency);
Mathematica (Basic Proficiency)

Experience with astronomical observation tools (specifically for GMOS on Gemini telescopes)

Experience with CANDELS and COSMOS catalogues

Spectroscopic Data Reduction Experience

Mac and Linux Proficiency

American Sign Language Basic Proficiency