

# RACHEL BUTTRY

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## EDUCATION

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<b>June 2019</b>	Bachelor of Science in Physics, Drexel University, Philadelphia, PA Minor in Mathematics, Minor in Philosophy
<b>May 2021</b>	Master of Science in Physics, Carnegie Mellon University, Pittsburgh, PA

## RESEARCH EXPERIENCE

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MARCH 2018 to AUGUST 2019	Large Synoptic Survey Telescope (LSST) and K2 <i>Drexel University Physics Department, Philadelphia, PA</i> Worked on developing methods of merging simulated LSST observations to construct a light curve that can be used to study quasar variability. Analyzed datasets from NASA's K2 mission to determine sources of error across different channels.
MARCH 2017 to MARCH 2018	Forman Lab <i>Drexel University WELL Center, Philadelphia, PA</i> Managed troubleshooting glitches and modifying training program built with Unity engine. Wrote R and Python scripts to merge large amounts of participant data across different data collection sources including SQL, Qualtrics and RedCap.
MARCH to SEPTEMBER 2016	Spectrum Systems Lab <i>Lockheed Martin, Cherry Hill, NJ</i> Held DoD security clearance. Collected 802.11 data using Wireshark then wrote python script to send pcap data via UDP sockets. Wrote MATLAB scripts to simulate UAV swarm behavior models to generate data sets. Performed high-level FPGA development in Simulink.
JUNE to AUGUST 2015	IceCube, STAR Project <i>Drexel University Department of Physics, Philadelphia, PA</i> Wrote Python programs to graph and analyze seasonal variation in muon flux using IceCube data. Successfully found seasonal trend in muon flux from various data from 2011.

## PRESENTATIONS

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AUGUST 2018:	LSST 2018 Project and Community Workshop, Tucson, AZ. <i>Exploring Methods to Merge Light Curves of Different Filters</i> Authors: Rachel Buttry, Gordon T. Richards, Matthew Graham
NOVEMBER 2016:	2016 Quadrennial Physics Congress (PhysCon), San Francisco, CA. <i>Observing the Seasonal Variation of Muon Flux with IceCube</i> Authors: Rachel Buttry, Naoko Kurahashi Neilson, William Giang
SEPTEMBER 2015:	STAR Summer Showcase 2015, Drexel University, Philadelphia, PA. <i>Observing the Seasonal Variation of Muon Flux with IceCube</i> Authors: Rachel Buttry, Naoko Kurahashi Neilson, William Giang

## SCHOLARSHIPS AND AWARDS

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JUNE 2018	WR Coley Award
SUMMER 2016	STAR (Students Tackling Advanced Research) Scholar, Drexel University
2014 to 2019	Dean's List, Drexel University
2014 to 2019	A.J. Drexel Scholarship

## OUTREACH

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MARCH 2017	Drexel University Kaczmarczik Lecture
JUNE 2016	Philadelphia Science Festival
NOVEMBER 2016	Philadelphia Area Girls Enjoying Science (PAGES)
FEBRUARY 2015	Drexel University Kaczmarczik Lecture
MAY 2015	Philadelphia Science Festival
OCTOBER 2014	Drexel University Kaczmarczik Lecture

## LEADERSHIP POSITIONS

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2015 to 2018	<b>Treasurer</b>   Society of Physics Students, Drexel University Created a budget to balance ongoing SPS funded research projects and monthly on-campus events. Organized travel to San Francisco to attend SPS PhysCon 2016.
2017 to 2018	<b>Treasurer</b>   Women in Physics Society, Drexel University Managed finances of the organization, helped with allocating funds for events, and created budget proposal to submit for APS Women in Physics grant.

## OTHER ACTIVITIES

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Anime & Gaming Organization, Drexel University