

Marcell Howard

Curriculum Vitae

PERSONAL DETAILS

Address 510 S Highland Ave, Pittsburgh, PA, 15206
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EDUCATION

University of Pittsburgh, Pittsburgh, PA *2019-Present*
Ph.D., Physics and Astronomy
Case Western Reserve University, Cleveland, OH *2015-2019*
B.S., Mathematics and Physics

RESEARCH EXPERIENCE

University of Pittsburgh *Spring 2020-Present*
Research Project advised by Arthur Kosowsky
Investigated theories of modified gravity, using simulation data to analyze their effects on the growth and evolution of large-scale structure

Case Western Reserve University *Fall 2018-Spring 2019*
Senior Thesis advised by Kurt Hinterbichler
Investigated the possible deviations that a theory of dark energy may have from General Relativity (GR) by applying three of the four classical tests of GR

Rutgers, the State University of New Jersey *Summer 2018*
Research Experience for Undergraduates advised by Andrew Baker
Probed the evolution of galaxies by stacking stellar-mass-selected samples and developed a pipeline that automated the process of modeling the stellar populations in over 2000 galaxies

Cornell University *Summer 2017*
Research Experience for Undergraduates advised by Gordon Stacey
Used far-infrared fine structure lines to characterize the star formation processes in nearby galaxies by using Python to process, analyze, and perform calculations on various data files

TEACHING EXPERIENCE

Teaching Assistant *Spring 2020*
PHYS 0176: Basic Physics for Science and Engineering II

- Held four recitation sessions per week.
- Graded quizzes and tests.

Supplemental Instructor *Fall 2017-Spring 2019*
MATH121+122: Calculus for Scientists and Engineers I and II

- Held three small groups and one recitation session per week.
- Graded quizzes and tests.

Teaching Assistant

Fall 2017-Spring 2019

PHYS121+122: General Physics I – Mechanics and General Physics II – Electricity and Magnetism

- Graded written homework handed in every week.
- Handed out in class assignments and provided help to various students.

TALKS AND POSTER PRESENTATIONS

Case Western Reserve University

May 2019

The People vs Mimetic Gravity

Contributed poster and talk

American Astronomical Society Meeting (Seattle, WA)

January 2019

Probing the Evolution of Galaxies Using Stellar Mass Selected Samples

Contributed poster

Case Western Reserve University

Oct 2018

Counting the Degrees of Freedom in Mimetic Gravity

Contributed talk

Rutgers, the State University of New Jersey

Aug 2018

Probing the Evolution of Galaxies Using Stellar Mass Selected Samples

Contributed poster and talk

Cornell University

Aug 2017

Using Far-Infrared Fine-Structure Lines for Characterizing the Star Formation Processes in Nearby Galaxies

Contributed poster and talk

SKILLS

<i>Programming</i>	Python, Mathematica, Matlab
<i>Software</i>	SciPy/matplotlib, AstroPy, git

PROFESSIONAL ORGANIZATIONS

National Society of Black Physicists

Fall 2018-Present

AWARDS

Dietrich School of Arts and Sciences Summer Research Predoctoral Fellowship
June 2020

Kenneth P. Dietrich School of Arts & Sciences Fellowship

August 2019

Hayden Scholarship

Dec 2017

Gaemsslen Grant Fund

Dec 2017

Case Alumni Scholarship

May 2017

University Scholarship

Sept 2015

CWRU Grant

Sept 2015