Clarissa Rizzo C Do Ó

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Citizenship Status: US Citizen

Research Interests: Astrophysics, Astronomy, Physics, Physical Science, Computing, Computer Science, Optics, Engineering, Instrumentation

Education

- **University of California, San Diego** — **San Diego, CA**
  Ph.D., Physics, Astrophysics Emphasis — *Expected*
- **University of California, San Diego** — **San Diego, CA**
  M.S., Physics, Astrophysics Emphasis — *Expected*
- **University of California, Santa Barbara** — **Santa Barbara, CA**
  B.S., Physics., Minor, Astronomy and Planetary Science (Honors) — *June 2020*
  Advisor: Prof. Ben Mazin

Research Experience

- **Lockheed Martin** — **Santa Barbara, CA**
  Test Engineering Intern — *January 2020 - August 2020*
  - Wrote MATLAB scripts to automate the testing process of infrared focal plane arrays (FPAs) and used these scripts to test parts.
  - Automated and documented MATLAB scripts for analyzing telegraph noise on infrared focal plane arrays.
  - Analyzed telegraph noise data on infrared FPAs.
- **NASA Jet Propulsion Laboratory** — **Pasadena, CA**
  Intern — *June - August 2019*
  - Worked on PARVI (Palomar Radial Velocity Instrument) under the guidance of Drs. Gautam Vasisht and Christopher Matthews.
  - Wrote Python programs to predict the instrument's photon throughput, and performed photometry and spectrophotometry on data to compare my projections to the actual throughput.
  - Performed simulations to analyze how the single-mode fiber coupling efficiency changes as we introduce optical aberrations into the system.
- **Mazin Lab at UC Santa Barbara** — **Santa Barbara, CA**
  Undergraduate Researcher — *June 2018 - August 2020*
  - Built a database for the Mazin Lab, an astrophysics laboratory that uses Microwave Kinetic Inductance Technology to directly image extrasolar planets. The database is a website built using Python Flask, HTML/CSS and JavaScript and is currently available on the laboratory's server.
  - Wrote Python code that corrected cosmic ray incidents for the new device developed by the lab (MEC - MKID Exoplanet Camera), as well as the angular differential imaging and spectral differential imaging programs.
  - Performed post-processing (angular differential imaging) and made contrast curves on MEC data with Python.

Skills

- Software and Tools: Python, MATLAB, HTML/CSS, LaTeX, Github, MS Office
- Operating Systems: Linux, Mac OS Windows

Selected Honors and Awards

- **National Science Foundation Graduate Research Fellow (NSF GRF)** — **San Diego, CA**
  Fellow — *2020-*
- **San Diego Fellowship** — **San Diego, CA**
  Fellow — *2020-*
- **Caltech SURF (Summer Undergraduate Research Fellowship) at NASA Jet Propulsion Laboratory** — **Pasadena, CA**
  Fellow — *June - August 2019*
- **Edison GRE Scholarship** — **Santa Barbara, CA**
  Student — *April- June 2019*
- **Edison Summer Research Program Scholarship** — **Santa Barbara, CA**
  Research Scholar — *June-August 2018*

Research Presentations

- **Summer Student Talks at JPL** — **Pasadena, CA**
  Research Talk — *August 2019*
- **APS Conference for Undergraduate Women in Physics (CUWiP)** — **Santa Barbara, CA**
  Poster Presentation — *January 2019*
- **UCSB Undergraduate Research Colloquium** — **Santa Barbara, CA**
  Poster Presentation — *August 2018*

Professional Memberships

- **BRASA - Brazilian Student Association** — **Santa Barbara, CA**
  UCSB President — *June 2018 - August 2020*
- **American Physical Society** — **Santa Barbara, CA**
  Student Member — *August 2018 - Present*