

José Vinícius de Miranda Cardoso

Undergraduate Student
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Department of Electrical Engineering
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<http://mirca.github.io>

Education

Undergraduate in progress in Electrical Engineering
Federal University of Campina Grande, Brazil
Advisor: Dr. Marcelo Sampaio de Alencar

2011 –

Visiting Student – Electrical Engineering and Computer Science
The Catholic University of America, USA
University of Maryland at College Park, USA
Brazil Scientific Mobility Program, Fully funded scholarship recipient
Advisors: Dr. Duilia F. de Mello and Dr. Jandro L. Abot

Fall 2014 – Spring 2015

Technical Degree in Informatics
Federal Institute of Education, Science and Technology of Paraíba, Brazil
Advisor: Dr. Carlos Danilo Miranda Regis

2007 – 2010

Professional Experience

Scientific Software Engineering Intern
NASA Ames Research Center, Silicon Valley, USA
Kepler/K2 Guest Observer Office
Mentor: Dr. Geert Barentsen

Mar 2017 – Feb 2018

Software Developer at Google Summer of Code
Google Summer of Code – The AstroPy Project
Mentors: Dr. Erik Tollerud, Dr. Hans Moritz Günther, and Dr. Brigitta Sipőcz

Summer 2016

Undergraduate Teaching Assistant
Probability and Statistics for Electrical Engineering and Computer Science
Federal University of Campina Grande, Brazil

Spring 2015

Undergraduate Research Assistant
Institute for Advanced Studies in Communications, Brazil
Mentor: Dr. Marcelo Sampaio Alencar

Fall 2015 – Fall 2016

Undergraduate Guest Researcher
National Institute of Standards and Technology, USA
Center for Nanoscale Science and Technology
Nanofabrication Research Group
Mentor: Dr. Marcelo Ishihara Davanço

Summer 2015

Undergraduate Research Assistant
Institute for Advanced Studies in Communications, Brazil
Mentor: Dr. Marcelo Sampaio Alencar

2011 – 2014

Projects

NASA Transiting Exoplanet Survey Satellite (TESS) Proposal

2018

Performing The Most Comprehensive Exoplanet Survey Of The Southern Sky With TESS Full Frame Images

Principal Investigator: Dr. Benjamin Montet (University of Chicago)

Co-Investigators: Dr. Dan Foreman-Mackey (Flatiron), Dr. Jessie Christiansen (IPAC/Caltech), Dr. Rodrigo Luger (U. of Washington), Dr. Dan Scolnic (U. of Chicago), Dr. Christina Hedges (NASA Ames), Nicholas Saunders (U. of Washington), José Vinícius de Miranda Cardoso (Universidade Federal de Campina Grande)

Google Summer of Code – The AstroPy Project

Point spread function photometry for fitting overlapping stars simultaneously

Summer 2016

National Institute of Science and Technology, USA

Parameter estimation for photoactivated localization microscopy

Summer 2015

Institute of Advanced Studies in Communications, Brazil

Statistical characterization of free space optical channels

2016 – 2016

Signal detection in generalized fading channels

2015 – 2016

Multiplatform software for objective stereoscopic image and video quality assessment

2013 – 2014

Stereoscopic video quality estimation using objective algorithms

2012 – 2013

Development of a novel objective algorithm for video quality assessment

2011 – 2012

Publications

Please, refer to <https://mirca.github.io/publications>

Competencies

Software: Python (numpy, scipy, pandas, scikit-learn), git/GitHub, C/C++, Unix shell

Courses: Stochastic Processes, Information Theory, Random Signal Theory, Estimation and Detection Theory

Languages: Native Portuguese, Fluent English

Awards

1. Selected, with full travel funding, to the workshop *Preparing for TESS*, New York City, USA, 2018
2. Selected to the workshop *Python in Astronomy*, Leiden, The Netherlands, 2017
3. Selected, with full travel funding, to the São Paulo School of Advanced Science on Nanophotonics, São Paulo, Brazil, 2016
4. Travel Grant Recipient, IEEE Antennas and Propagation Symposium, Puerto Rico, 2016
5. Young Author Recognition Award, International Telecommunication Union, ITU Kaleidoscope 2015
6. Young Author Recognition Award, International Telecommunication Union, ITU Kaleidoscope 2014
7. The paper “SQUALES: A QT-based Application for Full-Reference Objective Stereoscopic Video Quality Measurement” was one of the six papers nominated for Best Paper Award at ITU Kaleidoscope 2014

Additional Information

- Member of the AstroPy software development community.
- Participated in the IEEEExtreme 24-Hours Programming Competition in 2013, 2014, 2015, and 2016.
- Student of the week on the IEEE Students Facebook webpage.
- Participated at the *PSF Photometry and Software Workshop*, Space Telescope Science Institute, Baltimore, 2017.
- Attended NASA Ames Machine Learning Workshop, 2017.