

## 1 Education

**Fall 2014 – Spring 2015** *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: PhD Duilia F. de Mello and PhD Jandro L. Abot

**2011** *Undergraduate in progress in Electrical Engineering*

**Federal University of Campina Grande – UFCG, Brazil**

Advisor: PhD Marcelo Sampaio de Alencar

**2007 – 2010** *Technical Degree in Informatics*

**Federal Institute of Education, Science and Technology of Paraíba – IFPB, Brazil**

Advisor: MSc Carlos Danilo Miranda Regis

## 2 Professional Experience

**2017 – Current** *Data Analysis Intern at Kepler/K2 Guest Observer Office*

**NASA Ames Research Center, Silicon Valley, USA**

Mentor: Geert Barentsen

**Summer 2016** *Software Developer at Google Summer of Code*

**Google Summer of Code – The Astropy Project**

Mentors: Erik Tollerud, Hans Moritz Günther, and Brigitta Sipocz

**Spring 2015** *Undergraduate Teaching Assistant*

*Probability and Statistics for Engineering and Computer Science*

**Federal University of Campina Grande – UFCG, Brazil**

**Fall 2015 – 2016** *Undergraduate Research Assistant*

**Institute for Advanced Studies in Communications – Iecom, Brazil**

Mentor: Marcelo Sampaio Alencar

**Summer 2015** *Undergraduate Guest Researcher*

**National Institute of Standards and Technology – NIST, Gaithersburg, USA**

Center for Nanoscale Science and Technology

Nanofabrication Research Group

Mentor: Marcelo Ishihara Davanço

**2011 – 2014** *Undergraduate Research Assistant*

**Institute for Advanced Studies in Communications – Iecom, Brazil**

Mentor: Marcelo Sampaio Alencar

**2009 – 2010** *High-school Research Assistant*

**Federal Institute of Education, Science and Technology of Paraíba – IFPB**

Mentor: Carlos Danilo Miranda Regis

## 3 Projects

**May 2016 – August 2016** *Point spread function photometry for fitting overlapping stars simultaneously – The Astropy Project*

**2016 – 2016** *Statistical characterization of free space optical channels – Iecom*

**2015 – 2016** *Signal detection in generalized fading channels – Iecom*

**May 2015 – August 2015** *Parameter estimation for photoactivated localization microscopy (PALM)* – **NIST**

**2013 – 2014** *Multiplatform software for objective stereoscopic image and video quality assessment* – **Iecom**

**2012 – 2013** *Stereoscopic video quality estimation using objective algorithms* – **Iecom**

**2012 – 2012** *Development of a novel objective algorithm for video quality assessment* – **Iecom**

**2009 – 2010** *Reuse of obsolete computer hardware for digital and social inclusion* – **IFPB**

## 4 Publications

See <https://mirca.github.io/publications>

## 5 Competencies

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

**Favourite courses:** Stochastic Processes, Information Theory, Random Signal Theory, Estimation and Detection Theory, Adaptive Signal Processing, Data Analysis

**Languages:** Native Portuguese, Fluent English

## 6 Awards

1. Selected to GitHub's Field Day, San Francisco, USA, 2017
2. Selected to the Python in Astronomy Conference, Leiden, The Netherlands, 2017
3. Selected 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

## 7 Journal Reviewer

2017 – IET Image Processing

## 8 Additional Information

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