

# Fabio Pereira Santos – Curriculum Vitae

Department of Physics & Astronomy  
CIERA – Center for Interdisciplinary Exploration  
and Research in Astrophysics  
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## Education

**Doctorate:** Physics, Federal University of Minas Gerais (UFMG), 2009 - 2013 (Conclusion: March/2013)

Thesis: *"Photometric and Polarimetric Study of Galactic HII Regions"*

Advisor: Dr. Gabriel A. P. Franco, Co-Advisor: Dr. Alexandre Roman Lopes

**Master's Degree:** Physics, Federal University of Minas Gerais (UFMG), 2007 - 2009

Thesis: *"Interstellar Polarization at the Interaction Region between the Local Bubble and Loop I"*

Advisor: Dr. Wagner J. B. Corradi

**Bachelor's Degree:** Physics, Federal University of Minas Gerais (UFMG), 2003 - 2006

## Current Positions

**Post-doctoral Fellow**, Physics & Astronomy Department – CIERA, Northwestern University (Evanston, USA), October 2013 - present

## Previous Positions

**Post-doctoral Fellow**, Physics Department, Federal University of Minas Gerais (Belo Horizonte, Brazil), March 2013 - August 2013

**Adjunct Professor**, University Center UNA (Belo Horizonte, Brazil), February 2013 - July 2013

**Temporary Professor**, Physics Department, Federal University of Minas Gerais (Belo Horizonte, Brazil), 2010 - 2012

## Fields of Research Interest

Observational astrophysics, star formation, interstellar medium, HII regions, optical and near-infrared photometry and polarimetry, interstellar magnetic fields

## Research – List of Publications

### *Submitted Papers (under review)*

- **Santos, F. P.**, Franco, G. A. P., Roman-Lopes, A., Reis, W., Román-Zúñiga, C. G. - *Optical/Near-IR Polarization Survey of Sh 2-29: Magnetic Fields, Dense Cloud Fragmentations and Anomalous Dust Grain Sizes*, The Astrophysical Journal

*Published Papers*

- Busquet, G., Zhang, Q., Palau, A., Liu, H. B., Sánchez-Monge, A., Estalella, R., Ho, P. T. P., Gregorio-Monsalvo, I., Pillai, T., Wyrowski F., Girart, J. M., **Santos, F. P.**, Franco, G. A. P. - *Unveiling a network of parallel filaments in the infrared dark cloud G14.225-0.506*, The Astrophysical Journal Letters, v.764, p.26B, 2013
- **Santos, F. P.**, Roman-Lopes, A., Franco, G. A. P. - *A young stellar cluster within the RCW41 HII Region: deep NIR photometry and Optical/NIR polarimetry* - The Astrophysical Journal. , v.751, p.138, 2012
- Hissa, B., Duarte, J. G., Kelles, L. F., **Santos, F. P.**, et al. - *Membrane Cholesterol Regulates Lysosome-Plasma Membrane Fusion Events and Modulates Trypanosoma cruzi Invasion of Host Cells* - Plos Neglected Tropical Diseases. , v.6, p.e1583, 2012
- Sicardy, B., Ortiz, J. L., Assafin, M., Jehin, E., Maury, A., Lellouch, E., Hutton, R. Gil, Braga-Ribas, F., Colas, F., Hestroffer, D., Lecacheux, J., Roques, F., Santos-Sanz, P., Widemann, T., Morales, N., Duffard, R., Thirouin, A., Castro-Tirado, A. J., Jelínek, M., Kubánek, P., Sota, A., Sánchez-Ramírez, R., Andrei, A. H., Camargo, J. I. B., da Silva Neto, D. N., Gomes, A. Ramos, Martins, R. Vieira, Gillon, M., Manfroid, J., Tozzi, G. P., Harlinton, C., Saravia, S., Behrend, R., Mottola, S., Melendo, E. García, Peris, V., Fabregat, J., Madiedo, J. M., Cuesta, L., Eibe, M. T., Ullán, A., Organero, F., Pastor, S., de los Reyes, J. A., Pedraz, S., Castro, A., de la Cueva, I., Muler, G., Steele, I. A., Cebrián, M., Montañés-Rodríguez, P., Weaver, D., Corradi, W. J. B., **Santos, F. P.**, Reis, W., Milone, A., Emilio, M., Gutiérrez, L., Vázquez, R., Hernández-Toledo, H. (2011) - *A Pluto-like radius and a high albedo for the dwarf planet Eris from an occultation* - Nature (London). , v.478, p.493 - 496, 2011
- Reis, W., Corradi, W., de Avillez, M. A., **Santos, F. P.** - *Interstellar reddening in the Local Bubble and Loop I Region: insight from Strömgren photometry analysis and three-dimensional modeling* - The Astrophysical Journal. , v.734, p.8 - , 2011
- **Santos, F. P.**, Corradi, W., Reis, W. - *Optical polarization mapping toward the interface between the Local Cavity and Loop I* - The Astrophysical Journal. , v.728, p.104 - , 2011

## Teaching

*University Center UNA*

Fundamentals of Mechanics - 2013 - 1st Semester - 14h/week (2 classes)

*Federal University of Minas Gerais (UFMG)*

Fundamentals of Oscillations, Waves and Optics - 2012 - 2nd Semester - 8h/week (2 classes)

Fundamentals of Oscillations, Waves and Optics - 2012 - 1st Semester - 8h/week (2 classes)

Fundamentals of Oscillations, Waves and Optics - 2011 - 2nd Semester - 4h/week (1 class)

Experimental Physics: Mechanics and Electromagnetism - 2011 - 2nd Semester - 3h/week (1 class)

Experimental Physics: Electromagnetism and Optics - 2011 - 2nd Semester - 3h/week (1 class)

Fundamentals of Oscillations, Waves and Optics - 2010 - 2nd Semester - 4h/week (1 class)

Experimental Physics: Mechanics and Electromagnetism - 2010 - 2nd Semester - 6h/week (2 classes)

Experimental Physics: Mechanics and Thermodynamics - 2010 - 1st Semester - 3h/week (2 class)

## Seminar Presentations

*Polarimetric Observations of Galactic HII Regions with NTT 3.6m - ESO/La Silla*, 2012, XXXVII Annual Meeting of the Brazilian Astronomical Society; Aguas de Lindoia/Brazil, Oral presentation

*Observations of Star-forming Regions and Magnetic Fields through NIR Photometry and Optical/NIR Polarimetry*, 2012, Universidad de La Serena (ULS) - Physics Department; La Serena - Chile, Invited speaker

*NIR photometry and optical polarimetric survey of Galactic star forming regions: sources in the Vela Molecular Ridge*, 2011, AURA Lecture Hall, La Serena - Chile, Scientific Talk at the Cerro Tololo Inter-american Observatory (CTIO)

*Mapping the Optical Interstellar Polarization: From the Local Interstellar Medium to Massive Star-Forming Sites*, 2010, Universidad de La Serena (ULS) - Physics Department; La Serena - Chile, Invited speaker

## Conferences and Workshops Attended

**XXXVII Annual Meeting of the Brazilian Astronomical Society**, 2012, Congress - Aguas de Lindoia/Brazil; Poster presentation: *The magnetic field structure toward the Sh 2-29 HII Region*; Oral presentation: *Polarimetric Observations of Galactic HII Regions with NTT 3.6m - ESO/La Silla*

**62nd Lindau Nobel Laureate Meetings (Physics)**, 2012, Conference - Lindau/Germany;

**Magnetic Fields in the Universe III: from Laboratory and Stars to Primordial Structures**, 2011, Congress - Zakopane/Poland; Poster presentation: *NIR Photometry and Optical/NIR Polarimetry Toward the RCW41 Star-Forming Region*

**XXXV Annual Meeting of the Brazilian Astronomical Society**, 2010, Congress - Passa Quatro/Brazil; Poster presentation: *Study of a young massive cluster in the direction of RCW41: Characterization of the stellar population and the structure of the local magnetic field*

**International Astronomical Union XXVII General Assembly**, 2009, Congress - Rio de Janeiro/Brazil; Poster presentation: *Interstellar Polarization in the Interaction Region Between the Local Bubble and Loop I*

**XXXIV Annual Meeting of the Brazilian Astronomical Society**, 2008, Congress - Passa Quatro/Brazil; Poster presentation: *Polarimetric analysis of the interaction zone between the Local and Loop I Bubbles*

**XXXIII Annual Meeting of the Brazilian Astronomical Society**, 2007, Congress - Passa Quatro/Brazil; Poster presentation: *Study of the photometric variability of the star PDS530, a possible target for the CoRoT Satellite*

**XXXII Annual Meeting of the Brazilian Astronomical Society**, 2006, Congress - Atibaia/Brazil; Poster presentation: *Study of the photometric variability of the star PDS530 on the target search for the CoRoT Satellite's additional program*

**XXXI Annual Meeting of the Brazilian Astronomical Society**, 2005, Congress - Aguas de Lindoia/Brazil; Poster presentation: *Target Selection to the CoRoT Additional Program*

**2nd CoRoT-Brazil Workshop**, 2005, Congress - Ubatuba/Brazil Poster presentation: *Target Selection to the CoRoT Additional Program*

## Honors, Awards & Language Certificates

Nominated for participation at The 62nd Lindau Nobel Laureate Meetings (Lindau, Germany), 2012

Cambridge Certificate in Advanced English (CAE), University of Cambridge, 2008

## Fellowships

Post-doctoral Fellowship, CAPES, (Science Without Borders program), 2013 – present

Doctorate Research Fellowship, CNPq, 2009-2013

Master's Degree Research Fellowship, CNPq, 2007-2008

Undergraduate Research Fellowship, Fapemig, 2004-2006

Last updated: October 7, 2013