João Faria

Curriculum Vitæ

Personal Information

Name João Pedro de Sousa Faria

Born Santarém, Portugal, 30th of May 1990

Nacionality Portuguese

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EDUCATION

2012 - 2013 Master in Astronomy,

Faculdade de Ciências & Centro de Astrofísica (CAUP), Universidade do Porto,

Project title: *Probing inside binary stars with asteroseismology* Supervisors: Mário J. P. F. G. Monteiro; Margarida Cunha.

Final average grade: 19/20

2008 - 2011 Bachelor in Physics - minor in Astronomy & Astrophysics,

Departamento de Física, Faculdade de Ciências da Universidade de Lisboa,

Study plan can be acessed here; Final average grade: 16/20.

Grants and Awards

Title: Exoplanet Detection in Metal-Poor Stars **Supervisor:** Nuno C. Santos; Pedro Figueira

Institution: Centro de Astrofísica da Universidade do Porto (CAUP) **Duration:** 1 October 2013 - 30 September 2014 (12 months)

S&T Project ID: CAUP-08/2013-BGCT

Management Supervisor: Filipe Pires

Grant Institution: Centro de Astrofísica da Universidade do Porto (CAUP)

Duration: 1 July 2013 - 30 September 2013 (3 months)

Research Project ID: PTDC/CTE-AST/098754/2008

Scholarship Title: Probing Inside Binary Stars with Asteroseismology

Supervisors: Mário J. P. F. G. Monteiro; Margarida Cunha

Institution: Centro de Astrofísica da Universidade do Porto (CAUP)

Duration: 1 July 2012 - 31 December 2012 (6 months)

REFEREED PUBLICATIONS

The HARPS search for southern extra-solar planets: XXXV. The interesting case of HD41248: stellar activity, no planets?, Santos, N. C., Mortier, A., Faria, J. P. et al. 2014 (submitted)

Asteroseismic estimate of helium abundance of a solar analog binary system, Verma K., Faria, J. P., Antia H. M. et al., 2014 (submitted)

On the possibility of using seismic probes to study the core composition in pulsating white dwarfs, Faria, J. P., Monteiro M.J.P.F.G., Astron. Nachr. 333, 10, 954-957 (2012) **DOI** 10.1002/asna.201211830

SCIENTIFIC ACTIVITIES

MSc Dissertation

Asteroseismology of the solar-type stars 16 Cyg A and B, using data from the *Kepler* space telescope.

Undergraduate research project

Research project with Dr. Marco Grossi, studying the colours and metallicities of blue compact dwarf galaxies (BCD) in the Virgo Cluster.

Conference Posters

- Seismic diagnostics of the internal structure of 16 Cyg A and B
 - XXII National Astronomy and Astrophysics Meeting (Porto, September 2012) Supervised by Doctor Mário J. P. F. G. Monteiro and Doctor Margarida S. Cunha; Masters dissertation project.
- Using seismic probes to study the core composition in pulsating white dwarfs
 - The Modern Era of Helio- and Asteroseismology (Obergurgl, Austria, May 2012) Together with Doctor Mário J. P. F. G. Monteiro; research project for a Masters course on stellar structure and evolution.
- Cores e metalicidades de galáxias anãs azuis no Enxame da Virgem
- XXI National Astronomy and Astrophysics Meeting (Coimbra, September 2011)
 Supervised by Doctor Marco Grossi; final project of the undergraduate degree in Physics.

SEMINARS AND TALKS

- Acoustic Glitches in 16 Cygni
 XXIII National Astronomy and Astrophysics Meeting
 18 July 2013, FCUP Lisbon
- Acoustic Glitches in 16 Cygni
 6th Iberian Meeting on Asteroseismology
 27 May 2013, Aras de los Olmos Spain
- MESA Modules for Experiments in Stellar Astrophysics
 CAUP, DFA-UP
 CAUP, DRA-UP
 CAUP, DRA-
 - 16 January 2013, CAUP Porto
- Cores e Metalicidades de Galáxias Anãs Azuis no Enxame da Virgem CAAUL, DF-FCUL 13 July 2011, CAAUL - Lisbon

Scientific Interests

- Stellar Evolution; Stellar Convection and Modelling
- Exoplanets and host-stars
- Computational Astrophysics
- Star Formation

Conferences and Workshops

- XXIII National Astronomy and Astrophysics Meeting 18-19 July 2013, Lisbon, Portugal
- 6th Iberian Meeting on Asteroseismology 27-29 May 2013, Aras de los Olmos (Valencia), Spain
- XXII National Astronomy and Astrophysics Meeting 23-25 September 2012, Porto, Portugal

- The Modern Era of Helio- and Asteroseismology 20-25 May 2012, Universitätszentrum Obergurgl, Austria
- XXI National Astronomy and Astrophysics Meeting 7-10 September 2011, Coimbra, Portugal
- ALMA National Comunity Day 27 April 2011, CAAUL - Lisbon
- Joint European and National Astronomy Meeting (JENAM 2010)
 6-10 September 2010, FCUL Lisbon

OUTREACH

June 2013 - Collaborator of Outreach Unit

Centro de Astrofisica da Universidade do Porto

2010 - 2011 Co-organizer of monthly activity "Noites no Observatório"

Observatório Astronómico de Lisboa

2010 - 2011 Co-organizer of public outreach activities

Observatório Astronómico de Lisboa

Summer Monitor of the program "Ciência Viva no Verão"

2010/2011 Observatório Astronómico de Lisboa

Amateur Coordinated and participated in many workshops about observation and general use of Observations amateur telescopes on the Astronomical Observatory of Lisbon. These include night sky

recognition, telescope alignment and CCD astrophotography.

LANGUAGE SKILLS

Portuguese Native language

English Fluent - written and spoken

French Basic Spanish Basic

Computer Skills

OS Linux, Microsoft Windows

Programming Fortran, C, Python, MATLAB, R, Awk (proficient)

Mathematica, IDL (basic)

Office TEX (LATEX, BibTeX), Microsoft Office, OpenOffice

Software • Image Edition: Photoshop, GIMP

• Database: TopCat

• Plotting: Gnuplot, TopCat

Specific Knowledge of the IRAF environment, PyRAF;

Basic knowledge of ESO's GASGANO pipeline;

Presented results with the MESA stellar evolution code.

Data Acquisition SDSS (Sky Server/CasJobs), Nasa Extragalactic Database, ESO Archive

UPDATED

March 18, 2014