# João P. Faria

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## Research Interests

Exoplanet detection and characterisation in radial-velocity data; modelling and correcting for the effects of stellar activity in photometry and radial velocities; adaptive scheduling of observations; probabilistic data analysis.

## Education

| ONGOING   | Ph.D. in Astronomy Advisors: Nuno C. Santos and Pedro Figueira Dissertation: "Exoplanet detection around metal-poor stars."            | University of Porto         |
|-----------|--|-----------------------------|
| July 2013 | M.Sc. in Astronomy<br>Advisors: Mário J. P. F. G. Monteiro and Margarida S. Сиnна<br>Dissertation: "Asteroseimology of 16 Cyg A and B" | University of Porto         |
| July 2011 | B.Sc. in Physics   | <b>University of Lisbon</b> |

## **Publications**

- [A11] **J. P. Faria** and 16 other authors. The HARPS search for southern extra-solar planets XL. Searching for Neptunes around metal-poor stars. *Astronomy and Astrophysics*, 589:A25, 2016.
- [A10] **J. P. Faria** and 6 other authors. Uncovering the planets and stellar activity of CoRoT-7 using only radial velocities. *Astronomy and Astrophysics*, 588:A31, 2016.
- [A9] P. Figueira, **J. P. Faria**, and 3 other authors. A pragmatic bayesian perspective on correlation analysis the exoplanetary gravity stellar activity case. *Origins of Life and Evolution of the Biosphere*, 2016.
- [A8] A. Mortier, **J. P. Faria**, and 17 other authors. The HARPS search for southern extra-solar planets XXXIX. HD175607, the most metal-poor G dwarf with an orbiting sub-Neptune. *Astronomy and Astrophysics*, 585:A135, 2016.
- [A7] V. Adibekyan, P. Figueira, N. C. Santos, S. G. Sousa, **J. P. Faria**, and 8 other authors. Identifying the best iron-peak and  $\alpha$ -capture elements for chemical tagging: The impact of the number of lines on measured scatter. *Astronomy and Astrophysics*, 583:A94, 2015.
- [A6] J. H. C. Martins, N. C. Santos, P. Figueira, J. P. Faria, and 10 other authors. Evidence for a spectroscopic direct detection of reflected light from 51 Pegasi b. *Astronomy and Astrophysics*, 576:A134, 2015.
- [A5] A. Mortier, **J. P. Faria**, and 3 other authors. BGLS: A Bayesian formalism for the generalised Lomb-Scargle periodogram. *Astronomy and Astrophysics*, 573:A101, 2015.
- [A4] P. Figueira, **J. P. Faria**, and 5 other authors. Exoplanet hosts reveal lithium depletion. Results from a homogeneous statistical analysis. *Astronomy and Astrophysics*, 570:A21, 2014.

- [A3] N. C. Santos, A. Mortier, **J. P. Faria**, and 21 other authors. The HARPS search for southern extra-solar planets XXXV. The interesting case of HD41248: stellar activity, no planets? *Astronomy and Astrophysics*, 566:A35, 2014
- [A2] K. Verma, **J. P. Faria**, and 8 other authors. Asteroseismic estimate of helium abundance of a solar analog binary system. *The Astrophysical Journal*, 790:138, 2014.
- [A1] **J. P. Faria** and M. J. P. F. G. Monteiro. On the possibility of using seismic probes to study the core composition in pulsating white dwarfs. *Astronomische Nachrichten*, 333:954, 2012.

# Teaching Experience

| February, 2016       | Bayesian Statistics  Advanced Course, Institute of Astrophysics and Space Sciences  Created and lectured a course about Bayesian statistics, composed of a seminar talk and two hands-on computational classes.   |
|----------------------|---|
| November, 2015       | Python for Astronomers  Advanced Course, Center for Astrophysics University of Porto  Teaching assistant for introductory practical classes.  |
| Aug 31 - Sep 4, 2015 | Escola de Verão de Física (Physics Summer School)  Summer School, Faculty of Sciences, University of Porto  Supervised and lectured a project about "The energy of stars" for a class of 5 high-school students.  |
| March 26-28, 2014    | Stellar evolution models with the MESA code<br>Advanced Course, Center for Astrophysics University of Porto  Developed and coordinated a series of three hands-on tutorial classes demonstrating the use of the MESA stellar evolution code (Paxton et al. 2011; 2013). |

## Outreach

- Mentes que Brilham (TV show), interview about the work published in Martins et al. (2015), May 13, 2015.
- Universidade Júnior (University of Porto), monitor of scientific activities for middle-school students, July 2013.
- *Planetarium sessions (presenter)*, as collaborator of the Outreach Unit of CAUP, Summer 2013.
- · Noites no Observatório, monthly outreach events at the Lisbon Astronomical Observatory, 2010-2011.

# Talks / Posters

- P1 CoRoT-7 as seen with HARPS radial velocities. K2 Meeting. 10-11 May 2016, Porto, Portugal
- T4 Highlights from the Astro Hack Week. CAUP Cookie Seminar. Porto. 14 Oct, 2015
- P2 A radial velocity search for low mass planets around metal-poor stars: first statistical results. *Extreme Precision Radial Velocities*. Yale University, 5-8 July, 2015.
- T3 The metal-poor survey. CAUP Cookie Seminar. Porto. 23 Apr, 2014
- T2 Acoustic Glitches in 16 Cygni. 6th Iberian Meeting on Astroseismology. Aras de los Olmos, Spain. 27 May, 2013
- T1 MESA Modules for Experiments in Stellar Astrophysics. CAUP Cookie Seminar. Porto. Jan, 2013