

# CURRICULUM VITAE







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


**Interests:** Astronomical instrumentation on ground based telescopes; High angular and spectral resolution; Adaptive optics (wide field and extreme AO); Signal processing, wave-front sensing, atmospheric tomography, wave propagation through random media, linear and non-linear optimisation, inverse (large scale) problems, dynamical control.

## • APPOINTMENTS

- 2019 – **Visiting AO Scientist**   
W.M. Keck Observatory, Hawai'i, USA
- 2015 – 2019 **Chair of Excellence, A\*MIDEX Initiative of Excellence awardee**   
*Laboratoire d'Astrophysique de Marseille, France (Advisor of 4 post-docs)*
- 2013 – 2015 **Marie Curie Fellow**   
Centre for Astrophysics, University of Porto, Portugal (Advisor of 1 MSc)
- 2013 – 2015 **Invited Lecturer**  
Univ. Porto (~90h of teaching), high-resolution instrumentation, PhD, MSc levels
- 2012 – 2013 **Visiting scholar**   
Adaptive Optics Lab, Univ. Victoria, Canada (Co-advisor of 1 Ph.D.)
- 2010 – 2013 **Research Associate** in Adaptive Optics  
Herzberg Institute of Astrophysics, National Research Council, Victoria, Canada
- 2010 – 2013 **Invited researcher**   
SIM – Systems, Instrumentation and Modelling Lab, Univ. Porto, Portugal
- 2007 – 2010 **PhD candidate**   
ONERA – The French Aerospace Lab – Dept. of theoretical and applied optics
- 2004 – 2006 **Research assistant**   
ESO – European Southern Observatory, Germany


## • EDUCATION

- 2007 – 2010 Ph.D. (physics, *très honorable*); Institut Galilée, University Paris XIII, France 
- 1999 – 2004 Lic. (5-yr. dipl. equiv. to BSc.+MSc, top 5%); University of Porto, Portugal 

## • SUPERVISION & MENTORING

- 2015 – 2016 4 Postdocs; 1 PhD from U. of Victoria for 4 months @ Aix-Marseille Univ, France
- 2013 – 2015 1 MSc, 4 interns @ University of Porto, Portugal
- 2011 – 2015 1 PhD, 4 interns (co-supervision) @ Faculty of Graduate Studies, UVic, Canada

## • TEACHING ACTIVITIES

- 2015 – now Lecturer – Advanced Topics in Astronomical Instrumentation, Master POESII / Aix-Marseille University / France (~15h/year) 
- 2013 – 2015 Lecturer – Instrumentation in Astronomy, PhD in Astronomy and Astrophysics, FCUP - Faculty of Sciences, University of Porto (~15h/year)
- 2014 – 2015 Assistant lecturer of MSIN: Measurements, Sensors and Instrumentation, MSc EEC, FEUP -Faculty of Engineering, University of Porto (1 semester, 4h/week)
- 2008 – 2009 Assistant lecturer in wave propagation and wave-optics, BSc EEC, ESIEE, France (3 semesters, totalling 63h)

- **MAJOR COLLABORATIONS AND INTERNATIONAL PROJECTS**

- European Extremely Large Telescope – European Southern Observatory and associated partners on Real-Time Computer modelling, specification & design
- Giant Magellan Telescope Observatory – on modelling large-scale wide-field tomography and wave-front reconstruction
- Thirty Meter Telescope Narrow-band Adaptive Optics Facility – Caltech, CNRC et al – on new tomography and control algorithms and PSF reconstruction

- **SCIENTIFIC OUTPUT**

- 36 peer-reviewed papers (10 1st authored, 7 2nd authored)
- 100+ international conference proceedings (14 1<sup>st</sup> authored, 17 2<sup>nd</sup> authored)
- 20+ oral communications
- 10 posters (1st authored)
- 10 invited seminars, 10 research seminars
- h-index 13, 400+ citations



- **SELECTED FELLOWSHIPS&GRANTS (COMPETITIVE FUNDING)**

- 2015 – 2017 Co-fund PRESTIGE (Recipient C. Bond, role: Research leader)
- 2016 MITACS (Recipient M. Lamb, role: Research leader)
- 2015 – 2019 A\*MIDEX Initiative of Excellence, Rising Star Programme
- 2013 – 2015 Marie Curie, Centre for Astrophysics, University of Porto, Portugal
- 2007 – 2010 Ph.D. scholarship, Portuguese Science&Technology Foundation (FCT)
- 2004 – 2006 ADI research traineeship, ESO – European Southern Observatory, Germany

- **MEMBERSHIPS OF SCIENTIFIC SOCIETIES**

- 2013 – now Associated Member SPIE – International Society for Optics and Photonics, USA
- 2016 – now Associated Member OSA – Optical Society of America, USA

- **MISCELLANEOUS**

- Responsibilities: 2 PhD, 2 MSc defences (panel member), ATER selection panel, LAM Scientific Council, OPTICON WP10 task manager, Partenariat Herbert Curien coordinator (France-Austria)  
Reviewer for 6 journals, average 4 reviews/year
- Projects: H-2020 & FP7 OPTICON [↗](#), ELT HARMONI [↗](#) and MOSAIC [↗](#)  
NFIRAOS MCAO module (Thirty Meter Telescope) [↗](#)  
Raven demonstrator (Subaru Telescope) [↗](#)  
Gemini Planet Imager, ScExAO (Subaru) and VLT Planet Finder
- LOC/SOC: 10+ meetings (30-400 attendees each)
- Software OOMAO: Object-oriented Matlab Adaptive Optics (available on gitHub [↗](#))
- Prizes Accessit (2009), Ville de Marseille (2015), several mobility grants
- Outreach: ERASMUS+ grantee, regular outreach talks (e.g. ESERO [↗](#)), 2x 6-minute documentaries on Adaptive Optics applications [↗](#)