

## CURRICULUM VITÆ

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Date of birth : 22nd April 1971	Koenigstuhl 17
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### Professional Skills :

- PI of the Pan-Planets project, a transit search for extra-solar planets with the 1.8m Pan-STARRS telescope, and the 7 square degrees field of view camera at the Haleakala Observatory in Maui, Hawaii.
- Leading the transiting extrasolar planets group together with Prof. Thomas Henning, at the Max-Planck Institute fuer Astronomie, Heidelberg, Germany
- Scientific manager of the LAIWO camera for the search of transiting extrasolar planets at the Wise Observatory, Israel, presently being built at the Max-Planck fuer Astronomie, 2004-2007
- Member of the Strategy Survey Working Group of Pan-STARRS1
- Member of the working group on Photometric Searches of Extra-solar Planets of the ARENA Network on Anartica Research in Astronomy, 2005-date
- Organizer of the International Transiting Extrasolar Planets Conference, September, 25-28, 2006
- Co-organizer of the microlensing "Earth-hunter" workshop, November 5-6, 2005
- Referee of PhD thesis on Transiting Extrasolar Planets, 2005
- Reviewer of Astronomy scholar books for several portuguese editors, 2006
- Elected Equal opportunity Officer Deputy, Max-Planck fuer Astronomie, 2006
- Judge for Olympics of Physics, New Mexico State University, USA, 2001
- Teaching Experience (6 hours per week) at the University of Lisbon (IST), 1993-1994

### Awards :

- "Exceptional Researcher" Award of the Max-Planck Society
- Marie-Curie Intra-European Fellowship (2006)
- Alexander von Humboldt Foundation (2004-'05)
- Marie-Curie Intra-European Fellowship (2004-'06, declined)
- Les bourses de la Marie de Paris (2004-'05, declined)
- NASA grants (2001-04'),
- PRAXIS XXI-Portugal (1995-2000)
- ERASMUS (1994-'95).

### Technical Skills :

- Languages :Speaks and writes Portuguese (very good), French (very good), English (very good), German (good) and Spanish (good).
- Programming knowledge in Fortran 77, C and C++, shell and perl; Oracle data-base manipulation; graphics and data analysis tools: excel, Iraf, paw, idl, matlab, and several Photometry packages, such as PEIDA, DOPHOT, HSTPHOT, ISIS.

### Memberships :

- European Astronomical Society - EAS, French Astronomical Society - SF2A, Portuguese Astronomical Society - SPA

### Research interests:

- Extra-solar planets, transit methods, microlensing, origin of planetary systems, stellar population synthesis, luminosity functions and mass functions.

## Research Experience and Education

- **2006-'11**: W2 research staff position (5 year contract) at the Max-Planck Institut fuer Astronomie, Heidelberg, Germany. PI of the Pan-Planets project, a transit search for extra-solar planets with the 1.8m Pan-STARRS telescope, and the 7 square degrees field of view camera at the Haleakala Observatory in Maui, Hawaii.
- **2004-'06**: Post-doctoral fellow at the Max-Planck Institut fuer Astronomie, Heidelberg, Germany. Working with Prof. Thomas Henning on the establishment of a extra-solar planet search with the transit method.
- **2003-'04**: Post-doc fellow at NASA Ames Research Center, USA. Working with Dr. William Borucki (PI of the Vulcan project and the Kepler Space Mission).
- **2001-'03**: Post-doc fellow at the Astronomy Department, New Mexico State University, USA. Working with Prof. Jon Holtzman on the Comparison of Local Group Stellar Populations and the Construction of a Public Database of HST images of Local Group Galaxies.
- **1996-'01**: Ph.D. in Astrophysics at D.A.P.N.I.A/S.P.P-Centre d'Énergie Atomique, Saclay-France and University of Paris VII  
Thesis: Microlensing search towards the Center of our Galaxy with the EROS experience, supervised by Prof. James Rich.

*1997-'98*: One and 1/2 years stay in Chile for astronomical observations at the Observatory La Silla/ESO-Chile and to continue Ph.D. studies.

- **1995-'96**: DEA (Master) in Astrophysics at the Observatory of Meudon-France and Paris VII University  
Thesis: Extra-Solar Planet Microlensing Detection Probability, supervised by Prof. Jean Schneider
- **1990-'95**: Physics Engineering at the University of Lisbon (Engenharia Física-Tecnológica, Instituto Superior Técnico, Universidade Técnica de Lisboa)

## Refereed Publications:

- Limits on the Macho content of the Galactic Halo from the EROS-2 Survey of the Magellanic, Tisserand, P.; Le Guillou, L.; Afonso, C. et al. 2007, A&A, 469,387T
- The OGLE-II event sc5\_2859 : a Nova outburst, Afonso, C. et al., 2006, A&A, 450, 233A
- The Local group Stellar Populations Archive From HST/WFPC2, Holtzman, J.; Afonso, C.; Dolphin, A. 2006, ApJS, 166, 534H
- Removing the Microlensing Blending-Parallax Degeneracy Using Source Variability, Assef, R. J.; Gould, A.; Afonso, C. et al. 2006, ApJ, 649, 954A
- Galactic Bulge microlensing optical depth from EROS-2, Hamadache, C.; Le Guillou, L.; Tisserand, P.; Afonso, C. et al. 2006, A&A, 454, 185H
- Systematic Analysis of 22 Microlensing Parallax Candidates, Poindexter, S.; Afonso, C. et al. 2005, ApJ, 633, 914P
- EROS 2 photometry of probable R Coronae Borealis stars in the Small Magellanic Cloud, Tisserand, P.; Marquette, J. B., Beaulieu, J. P.; de Laverny, P.; Lesquoy, É.; Milsztajn, A.; Afonso, C. et al. 2004, A&A,424,245T
- Type Ia supernova rate at a redshift of  $\sim 0.1$ , Blanc, G.; Afonso, C. et al. 2004, A&A,423,881B
- Bulge Microlensing Optical Depth from Eros 2 Observations, Afonso, C. et al., 2003, A&A, 404, 145
- Limits on Galactic dark matter with 5 years of EROS SMC data, Afonso, C. et al., 2003, A&A, 400, 951
- EROS 2 proper motion survey: Constraints on the halo white dwarfs, Goldman, B.; Afonso, C. et al., 2002, A&A, 389L, 69G
- Observation of periodic variable stars towards the Galactic spiral arms by EROS II, Derue, F. Marquette, J.-B.; Lupone, S., Afonso, C. et al., 2002, a&A, 389, 149D
- Blue irregular variable stars in the Small Magellanic Cloud from EROS2: Herbig Ae/Be or classical Be stars?, Beaulieu, J.-P, de Wit, W. J.; Lamers, H. J. G. L. M.; Marquette, J.-B.; Coutures, C.; Leisy, P.; Totor, S.; Palanque-Delabrouille, N.; Afonso, C. et al., 2001, A&A, 380, 168B
- Photometric constraints on microlens spectroscopy of EROS-BLG-2000-5, Afonso, C. et al., 2001, A&A, 378, 1014A
- Observation of microlensing toward the galactic spiral arms. EROS II 3 year survey, Derue, F.; Afonso, C. et al., 2001, A&A, 373, 126D
- Type Ia supernova rate at  $z \sim 0.1$ , Hardin, D.; Afonso, C. et al., 2000, A&A, 362, 419H
- Not enough stellar mass Machos in the Galactic halo, Lasserre, T. ; Afonso, C. et al., 2000, A&A, 355L, 39L
- Combined Analysis of the Binary Lens Caustic-crossing Event MACHO 98-SMC-1, Afonso, C. et al., 2000, ApJ, 532, 340A

- EROS 2 proper motion survey: a field brown dwarf, and an L dwarf companion to LHS 102, Goldman, B. ; Delfosse, X.; Forveille, T.; Afonso, C. et al., 1999, A&A, 351L, 5E
- Observation of microlensing towards the galactic spiral arms. EROS II. 2 year survey, Derue, F. ; Afonso, C. et al., 1999, A&A, 351, 87E
- A slope variation in the period-luminosity relation for short period SMC Cepheids, Bauer, F. ; Afonso, C. et al., 1999, A&A, 348, 175E
- Microlensing towards the Small Magellanic Cloud-EROS 2 two year analysis, Afonso, C. et al., 1999, A&A, 344L, 63A
- AGAPEROS: Searches for microlensing in the LMC with the Pixel Method. II. Selection of possible microlensing events , Melchior, A.; Afonso, C. et al., 1998, A& A, 339, 658M
- Near-term detectability of extrasolar planets: TEP network observations of CM Draconis, Deeg, H.; Doyle, L. R.; Kozhevnikov, V. P.; Martin, E. L.; Oetiker, B.; Palaiologou, E.; Schneider, J.; Afonso, C. et al., 1998, A&A, 338, 479D
- EROS 2 intensive observation of the caustic crossing of microlensing event MACHO SMC-98-1, Afonso, C. et al., 1998, A&A, 337L, 17E
- Microlensing towards the Small Magellanic Cloud-EROS 2 first year survey, Palanque-Delabrouille, N. ; Afonso, C. et al., 1998, A&A, 332, 1P
- Observational Limits on Machos in the Galactic Halo, Renault, C.; Afonso, C. et al 1997, A&A, 324L, 69R

**Conferences and Workshops:**

- 2007 July : Michelson Summer School, NASA Ames Research Center (invited talk)
- 2006 September : Transiting Extra-solar Planets Workshop, MPA, Heidelberg (talk)
- 2005 October : Protostars and Planets V, Hawaii (poster)
- 2005 November : Microlensing Earth-Hunter Workshop, Heidelberg, Germany (talk)
- 2005 October: Protostars and Planets V, Big Island Hawaii, USA (poster)
- 2005 October : Direct imaging of Extra-solar Planets, Nice, France (poster)
- 2005 July : XV National Astronomy Conference, Lisbon, Portugal (talk)
- 2005 May : Planet and Star Formation Group Workshop, Buchenbach, Germany (talk)
- 2004 July: 3rd Thinkshop of Robotic Astronomy, AIP, Potsdam, Germany
- 2003 July: Extrasolar Planets, Today and Tomorrow, IAP, Paris, France
- 2002 December: Texas Symposium in Tuscany, Florence, Italy (poster)
- 2001 August: *Cool Stars, Stellar Systems, and the Sun, 12th Cambridge Workshop*, Boulder, U.S.A.
- 2001 June: *The HST Local Group Stellar Populations Archive*, AAS Meeting in Albuquerque, New Mexico (poster)
- 1999 March: *VLT Symposium*, Antofagasta-Chile (poster)
- 1999 January: *AAS 193 Meeting*, Austin-Texas (poster)
- 1998 December: *Texas Symposium*, Paris-France (poster)
- 1998 January: *International Microlensing Workshop*, IAP, Paris, France
- 1998 August: *Mt. Stromlo Symposium: Bright Stars and the Galactic Halo*, Canberra-Australia (poster)
- 1997 December: *Young Scientist Meeting*, Brittany-France (talk)
- 1996 September: *Astronomy Meeting*, Évora-Portugal
- 1996 September: *Extra-Solar Planet Microlensing Detection Probability*, International Astroparticles Workshop, Faro-Portugal (talk)
- 1996 January: *International Microlensing Workshop*, Orsay, France
- 1993 June: *Astronomy Meeting*, IST-Lisbon
- 1993 March/June: *Gravitation Conferences*, IST-Lisbon

**Astronomical Observations:**

- 2006: 60 hours on the WFI of the 2.2m telescope in La Silla, Chile
- 2005: 111 hours on the WFI of the 2.2m telescope in La Silla, Chile

- 2001: one night at the 3.5m telescope at the Apache Point Observatory, New Mexico, *i'* and *z'* photometry of *L* and *T* dwarfs from *SDSS* and *2MASS*
- 1998-'99: two weeks in total at the 1.54m Danish telescope at La Silla-Chile, *EROS* Supernova *U,B,V,R,i* photometric follow-up
- 1998 May: one night at the 3.6m E.S.O. telescope at La Silla-Chile, *EROS* Supernova low-resolution spectrometric follow-up
- 1995-'99: Observatory La Silla-Chile at the one meter MARLY telescope: *EROS* permanent observing of several fields in the Small and Large Magellanic Clouds, Spiral Arms and Galactic Center to detect Microlensing Events, February/March 1995, March/April 1997, August/September 1997, January/February 1998, April/May 1998 and June 1998, each time a 3 weeks stay
- June/July 1996: Observatory Haute Provence-France at the 1,2 meter telescope, *Eclipse detection by follow-up of the Binary System CM-Draconis in the Snake Constelation*