

AGNÈS FERTÉ

CURRICULUM VITAE

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Postdoctoral Research Assistant

University of Edinburgh \diamond Royal Observatory \diamond EH9 3HJ

RESEARCH INTERESTS

Probing the late universe: statistics, weak lensing, large scale structures, cosmic microwave background, cosmic acceleration.

EDUCATION AND APPOINTMENTS

PDRA	University of Edinburgh	10/2014 - present
PhD	Astrophysics; University Paris-Sud	9/2011 - 9/2014
MPhys	Physics; University Paris-Sud	9/2009 - 6/2011
BSc	Physics; University Paris-Sud	9/2008 - 6/2009
Classe Préparatoire	Mathematics and Physics; Lycée Clémenceau, Reims	9/2006 - 6/2008

PUBLICATIONS

First author publications:

1. **A. Ferté**, D. Kirk, A. Liddle, J. Zuntz, “*Testing gravity on cosmological scales with cosmic shear, CMB and RSD*”, in *prep.*, 2017
2. **A. Ferté**, J. Peloton, J. Grain, R. Stompor, “*Detecting the tensor-to-scalar ratio with the pure pseudospectrum reconstruction of B -mode*”, *Phys. Rev. D* **92**, 083510, 2015
3. **A. Ferté**, J. Grain, “*Detecting chiral gravity with the pure pseudospectrum reconstruction of the cosmic microwave background polarized anisotropies*”, *Phys. Rev. D* **89**, 103516, 2014
4. **A. Ferté**, J. Grain, R. Stompor, M. Tristram, “*Efficiency of pseudo spectrum methods for estimation of the cosmic microwave background B -mode power spectrum*”, *Phys. Rev. D* **88**, 023524, 2013.

Contributed publications:

5. DES Collaboration, “*Dark Energy Survey Year 1 Results: Cosmological Constraints from Galaxy Clustering and Weak Lensing*”, arXiv:arXiv:1708.01530, 2017
6. M. A. Troxel, N. MacCrann, J. Zuntz, T. F. Eifler, E. Krause, S. Dodelson, D. Gruen, J. Blazek, O. Friedrich, S. Samuroff, J. Prat, L. F. Secco, C. Davis, **A. Ferté** et al. (DES Collaboration), “*Dark Energy Survey Year 1 Results: Cosmological Constraints from Cosmic Shear*”, arXiv:1708.01538, 2017
7. E. Krause, T. F. Eifler, J. Zuntz, O. Friedrich, M. A. Troxel, S. Dodelson, J. Blazek, L. F. Secco, N. MacCrann, E. Baxter, C. Chang, N. Chen, M. Crocce, J. DeRose, **A. Ferté** et al. (DES Collaboration), “*Dark Energy Survey Year 1 Results: Multi-Probe Methodology and Simulated Likelihood Analyses*”, arXiv:1706.09359, 2017

SKILLS

• COMPUTING

- Mainly: Python, IDL, C/C++. Basics: Fortran 90, Matlab, Mapple, Labview.
- Parallelised computing (use of MPI library).
- Numerical codes (used and modified): CAMB, Healpix, CosmoSIS, MGCamb, CLASS, x2pure.

• LANGUAGE

French (mother tongue), English (fluent), Spanish (basics).

ACADEMIC RESPONSABILITIES

Referee for MNRAS (2014-)
Organiser of Royal Observatory, Edinburgh Colloquia (2017-)
Organisation of the DES session at the National Astronomy Meeting (2016)
Member of the laboratory council of the Institut d'Astrophysique Spatiale (2014)
PhD students representative - Participation to the council, organisation of the IAS PhD students day and of the lab days
Member of the administrative council of Observatoire des Sciences de l'Univers de Paris Sud (2013)
PhD students representative - Participation to the council, minutes to the IAS PhD students
Organisation of the "Elbereth 2012" and "Elbereth 2011" conferences (2011-2012)
Conference for PhD students from Paris area in astronomy, 120 attendees.
Coordinator of the 2012 edition, invitation of leading figures like the astronaut Jean-François Clervoy, budget gestion and orders, communication

MAIN ACADEMIC TALKS

• INVITED TALKS

University Paris-Sud	Seminar	09/2017
University of Geneva	Seminar	5/2017
Oslo University	Seminar	10/2016
Trieste	Experimental Search for Quantum Gravity conference	9/2014

• CONFERENCE AND MEETING TALKS

Edinburgh	SUPA/Cormack meeting	11/2017
Orsay	Dark Energy conference	9/2017
Chicago	Dark Energy Survey meeting	6/2017
Quy-Nhon	50 years after CMB discovery	8/2015
Marseille	Frontier of Fundamental Physics	7/2014
Santander	Exploring the Physics of Inflation	6/2013

CURRENT COLLABORATIONS

Dark Energy Survey Member since 2014, Theory and Combined Probes working group

OBSERVING EXPERIENCE

DECam	11/2017 (8 nights)
DECam	11/2016 (7 nights)

STUDENTS SUPERVISED

Thibaut Perdereau	Undergraduate	5/2017-7/2017
Tien Bui	Summer Student	6/2017-7/2017

TEACHING EXPERIENCE

The Distant Universe (Lecture series) <i>Telescopes, structure formation, primordial universe</i>	2016 and 2017
Tutor at the engineering school Institut d'Optique Graduate School <i>Polarisation, interferometry, holography, MATLAB</i>	2011-2014

Tutor at the *Exploiting the Herschel and Planck data* international school
Use of the Planck data, IDL

2011-2014

AWARDS

Support to participate to the DES Madrid Meeting 2015	11/2015
Paris-Saclay finalist of the “Ma thèse en 180 secondes” contest	5/2014
Grant from l'École de Physique des Houches to participate to the school	7/2013
Doctoral grant from the French ministry	7/2011

OUTREACH

• PUBLIC TALKS

Paris	Invited for the 350 years of the Paris Observatory	9/2017
Edinburgh	Invited for Pint of Science festival	5/2017
Edinburgh	Observatory to high-school students	9/2015
University Paris-Sud	Conference to general public	4/2014
Bois d'Arcy	Remand centre to inmates	1/2014
Paris area	Local and engineering school astronomy associations	2012-2013

• MEDIA

Social media	Newsletter and analytics for Dark Energy Survey	2015-
Twitter	Organisation of EnDirectDuLabo account	2014-2016
Podcast	Interview for Edinburgh University Science Podcast	1/2015
Radio	Interview for France Culture	5/2014
Exhibition	Animation of particle, nuclear physics and cosmology exhibition	11/2013

REFERENCES

Andrew Liddle	Professor, University of Lisbon	arl@roe.ac.uk
Joe Zuntz	Royal Observatory, Edinburgh	joezuntz@googlemail.com
Julien Grain	CNRS, Institut d'Astrophysique Spatiale	julien.grain@ias.u-psud.fr