

## Francis Bernardeau, curriculum vitae

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### Positions

- Jan 2014 - : Director of IAP, Paris;
- Oct. 2013: Invited professor at the university of Tokyo ;
- Sept. 2008-: Part time teaching position at Ecole Polytechnique;
- Jan – June 2008: Visiting Research Professor at the Canadian Institute of Theoretical Astrophysics, University of Toronto;
- 1994-: Permanent Researcher at the Institut de Physique Théorique de Saclay;
- 1992–1994: Postdoctoral fellow at the Canadian Institute of Theoretical Astrophysics, University of Toronto;
- 1989–1992: PhD student at the Service de Physique Théorique de Saclay;

### Education

- 2001: “Habilitation à Diriger des Recherches” from University Paris-Diderot;
- 1992: PhD in Theoretical Physics from University Paris-Sud under the supervision of Prof. Richard Schaeffer from the Service de Physique Théorique de Saclay “Formation, Evolution and Statistical Properties of the Large-Scale Structure of the Universe”;
- 1989: Diploma for Advanced Studies in Theoretical Physics from University Pierre et Marie Curie (Paris 6);
- 1988: Graduated from Ecole Polytechnique.

### Research themes and publications (about 80 publications in peer-reviewed journals; 24 in conference proceedings and one textbook of theoretical cosmology)

My main research activities are related to the studies of the large-scale structure of the universe, from the mechanisms of its formation, like inflation, to the study of its statistical properties. Some of my most significant publications include,

- Resummed propagators in multicomponent cosmic fluids with the eikonal approximation, Bernardeau, Francis; van de Rijt, Nicolas; Vernizzi, Filippo, PRD 85, 3509, 2012
- Cosmic microwave background bispectrum on small angular scales, Pitrou, Cyril; Uzan, Jean-Philippe; Bernardeau, Francis, 2008, PRD, 78, 063526, 2008
- Non-Gaussianity in multifield inflation, Bernardeau, Francis; Uzan, Jean-Philippe, 2002, PRD, 66, 103506, 2002
- Large-scale structure of the Universe and cosmological perturbation theory, Bernardeau, F.; Colombi, S.; Gaztañaga, E.; Scoccimarro, R., 2002, Phys Rep, 367, 1, 2002
- Weak lensing statistics as a probe of  $\Omega$  and power spectrum. Bernardeau, F.; van Waerbeke, L.; Mellier, Y., 1997, A&A, 322, 1, 1997

### Administration

- Member of the Editorial Board of the *Report on Progress in Physics* journal (IOP publications);
- Chairman of the AERES evaluation committee of the LUTH, February 2009;
- Member of the scientific committee of Cargèse School since September 2008;
- Chairman of the scientific committee of the French “Programme National de Cosmologie”, Jan 2006 – Dec 2008;
- Head of the French “Programme National de Cosmologie”, July 2002 – Dec 2006;
- Member of the scientific committee of the Interdisciplinary Program Astroparticles (2004-2008);
- Member of the CNRS scientific committee for Cosmology and Astroparticles (2003–2008);
- Member of the scientific committee of the Department of Astrophysics of Saclay (2002–2013);
- Member of the evaluation committee of the Laboratoire de Physique Théorique d'Orsay (2005);
- Member of the CNRS scientific committee for Theoretical Physics (2000–2004);
- Member of the scientific committee of the Department of Theoretical Physics of Saclay (1999–2001)

### Awards

- Compaq/SFAA award from French Society of Astronomy and Astrophysics (Sept. 1999).
- Daniel Guinier (for young scientists) award from the French Physical Society (Jan. 1993);