

# Curriculum Vitae – Prof. Frédéric Courbin

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## Education and employment history

- 2017-present: Professor at EPFL
- July 2009-2016: Tenured Senior Scientist (Maître d’Enseignement et de Recherche, MER), Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland
- July 2004-2009: Scientist, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland
- 2002-2004: Marie Curie Fellow, Astrophysics Institute, University of Liège, Belgium.
- 1999-2002: Postdoctoral fellow at the “Universidad Católica de Chile” (jointly with ESO), Santiago, Chile.
- 1996-1999: PhD thesis obtained with the highest honors, on 1999 January 11: *Déconvolution et combinaison optimale d’images astronomiques: application au cas des mirages gravitationnels*. Advisor Prof. P. Magain, Liège University, Belgium.
- 1995: ESO studentship (Garching). First year of PhD. Local advisor: Prof. G. Meylan
- June 1994: Master in astrophysics, “Université Pierre et Marie Curie”, Paris-VI, France.
- June 1993: Magistère de Physique fondamentale, Université Paris-XI, Orsay, France.

## Institutional responsibilities

- Faculty member of the new Physics Institute (IPHYS) at EPFL.
- Graduate Student Advisor for the Physics Doctoral School.
- Member of the committee of the Physics Doctoral School at EPFL.

## Approved research projects (most recent)

- ERC Advanced grant COSMICLENS (starts Jan 2019): *Cosmology with Strong Gravitational Lensing*
- SNSF-sinergia (ends 31 May 2021): *Euclid: high-precision cosmology in the dark sector*
- SNSF (ends 30 February 2017 ): *Optimal Signal-extraction Algorithms for Future Cosmological Surveys*
- SNSF (ends 31 May 2021): *COSMOGRAIL: Cosmology with Time Delays in Gravitationally Lensed Quasars*

## Supervision of junior researchers

- Advisor or co-advisor of more than 40 master students since 2001 (20 in the last 5 years)
- Co-advisor of 15 PhD students since 2001 (4 in the last 5 years)
- Trained 8 young postdocs since 2004 (3 in the last 5 years)

## Teaching activities

- Since 2017: MOOC "Introduction of Radio-astronomy", under development with Prof. J.-P. Kneib and colleagues from the Square Kilometer Array in South Africa.
- Since 2014: MOOC "Introduction to Astrophysics". Bachelor level. Available on the [edx.org](https://edx.org) platform. Over 20'000 students from 136 countries. Since 2017, this MOOC is accessible "on demand" in French and in English.
- Since 2010: Dark and Visible Matters (10 students/y). EPFL, Doctoral level.
- Since 2007: Introduction to Astrophysics (120 students/y). EPFL, Bachelor level.
- Since 2007: Astrophysics Practical Works (10 students/y). EPFL, Master level.

## Membership of panels, boards

- 2017- : Member of the French ANR evaluation committee (Agence Nationale pour la Recherche).
- 2014- : Member of the French HCERES evaluation committee (Haut Conseil de l'Evaluation de la Recherche et de l'Enseignement Supérieur, France).
- 2013-2014: Member of the ESO Observing Program Committee (OPC).
- 2013- : Reviewer for the European Research Council (ERC), advanced and starting grants.
- 2010- : ESA *Euclid* mission: Co-lead of OU-SHE (shear measurement) in the *Euclid* consortium, along with Andy Taylor (University of Edinburgh, UK) and Tim Schrabback (Bonn University, Germany). Shear measurement is the main cosmological probe implemented in the ESA *Euclid* mission.
- 2010- : ESA *Euclid* mission: Lead of all the activities around strong gravitational lensing (in OU-SHE).
- 2010- : ESA *Euclid* mission: Lead of several work packages about image deconvolution, image simulation, PSF measurement.
- 2010- : External referee for the Belgian National Science Foundation (FNRS) and for the German Deutsche Forschungsgemeinschaft (DFG).
- 2006-2009: Swiss representative at the Users Committee of the European Southern Observatory (ESO).
- Member of the Time Allocation Committee (TAC) for the NASA-ESA Hubble Space Telescope, 2004-2005, Cycle 13. Panel "Cosmology and quasar absorption lines".
- Member of more than a 20 PhD theses committees since 2002, and of many masters theses committees in Belgium, Chile, Colombia, France, Norway, Switzerland.

## Active memberships in scientific societies

- Member of the International Astronomical Union (IAU).
- Member of the Swiss Society for Astrophysics and Astronomy (SSAA).

## Organization of conferences

- 2016-2018: Co-organizer of 3 workshops on strong lensing at the ISSI-Bern center / Switzerland
- 2015: *Euclid* consortium annual meeting 2015 / 500 participants / EPFL / Switzerland
- 2013: Main organizer of the cosmoprobe2013 meeting / 80 participants / EPFL / Switzerland
- 2011- On average organization of 2 meetings per year related to *Euclid* and participation to many more meetings related to the Science Ground Segment of *Euclid*.

## Prizes and awards

- 2018: ERC Advanced Grant (3.2 Meuro)
- 2002: Marie Curie Individual Fellowship.
- 1999: Boelpaep prize: "Important contribution to signal processing". Royal Academy of Science, Belgium.
- 1995: ESO studentship (Garching).