

Kai Hoffmann

Curriculum Vitae

Research Interests

Large-scale Structure, Galaxy Formation and Alignment, Weak Lensing, Re-Ionization

Personal Data

Date of Birth: 15/07/1983

Nationality: German

Research stays and Appointments

since - 03/2022 Postdoc, Institute of Space Sciences, Barcelona

06/2018 - 02/2022 Postdoc, University of Zurich

09/2016 - 08/2018 Postdoc, Tsinghua Department of Astronomy, Beijing

08/2015 - 11/2015 visitor at the International Centre for Theoretical Physics, Sao Paulo

03/2015 - 08/2016 Postdoc, Institute of Space Sciences, Barcelona

03/2012 - 02/2015 Ph.D. student, Institute of Space Sciences, Barcelona

07/2011 - 02/2012 Predoc, Institute of Space Sciences, Barcelona

02/2010 - 04/2011 Masters student, Leibniz-Institut für Astrophysik, Potsdam

Education

Ph.D., Physics

Universitat Autònoma de Barcelona, Spain, 2012- 2015

Final mark: Excellent Cum Laude

Thesis: *Cosmology with Galaxy Clustering*

Supervisor: *Prof. Enrique Gaztañaga*

Diplom (equivalent to Master's degree), Physics

Universität Potsdam, Germany, 2004-2007, 2008-2011

Università degli Studi di Firenze, Italy, 2007-2008

Final mark: 1.4 (1=very good, 2= good, 3=satisfying, 4=sufficient)

Thesis: *Analysis of the Cosmic Web - Observation versus Simulations*

Supervisor: *PD Dr. Volker Müller*

Research Grants and Fellowships

- FI Ph.D. fellowship, Generalitat de Catalunya (2012-2015)
- China Post-doctoral Science Foundation, Special Program, (2018, 80,000 RMB)
- National Natural Science Foundation of China, Research Fund for International Young Scientists (2018, 150,000 RMB)
- Juan de la Cierva-formación postdoc fellowship (2018, 50.000 Euro, declined)
- Research grant from the University of Zurich (2020, 40,000 CHF)

Academic activities

- Co-lead of the Euclid work package for weak lensing simulations, since 2019
- external collaborator in the Dark Energy Survey, since 2020
- Mentor for student seminars on galaxy formation at Zurich University, 2019-2021
- Co-organizer of institute seminars on cosmology at Zurich University, 2018-2022

General quality indicators

- 17 publications in Monthly Notes of the Royal Astronomical Society, Astronomy & Astrophysics, Physical Review D
- 8 first author publications
- total number of citations = 274 (including 18 self-citations, according to ADS)
- h-index = 13
- 12 talks and 2 posters presented at international workshops and conferences
- 13 invited talks at institutes

Selected Talks

The Dark Side of the Universe

- Luzern (Switzerland), public Science Slam, 2018, contributed

Modelling Intrinsic Galaxy Alignment

- Guangzhou (China), Sino-Germany Workshop on Galaxy and Cosmology, 2016, contributed

Signatures of Cosmic Reionization on the 21cm 3-Point Correlation

- CERN (Switzerland), EPFL/CERN/UNIGE Joint Encounter, 2018, invited

Accuracy of bias measurements from 3-point galaxy correlations

- Seoul (Korea), KIAS Workshop on Cosmology and Structure Formation, 2016, contributed

Galaxies as biased tracers of the cosmic web

- Sao Paulo (Brazil), USP, 2015, colloquium

Halo bias from clustering and abundance

- Bonn (Germany), Argelander-Institut für Astronomie, 2015, invited

Measuring the growth of matter fluctuations with third-order galaxy correlations

- Trieste (Italy) 2013, conference *Workshop on Galaxy Bias: Non-linear, Non-local and Non-Gaussian*, contributed

Skills

COMPUTATIONAL EXPERIENCE

Daily: Python, C++

Other: emcee, 21cmFast, COLA, HEALPix, Git, SQL, different job scheduling systems

LANGUAGES

German (native), English (very good), Spanish (good), Swiss German (terrible)

References

Prof. Enrique Gaztañaga (Ph.D. supervisor)
Universitat Autònoma de Barcelona

Prof. Romain Teyssier (former postdoc supervisor)
University of Zurich

Prof. Yi Mao (former postdoc supervisor)
Tsinghua University

Prof. Alexander Knebe (collaborator)
Universidad Autònoma de Madrid