Sebastian Bocquet

CURRICULUM VITAE

sebastian.bocquet@physik.lmu.de
Ludwig-Maximilians University (LMU) Munich, Faculty of Physics
Universitäts-Sternwarte, Scheinerstr. 1, 81679 München, Germany

EDUCATION AND ACADEMIC APPOINTMENTS

LMU Munich, Physicist, faculty member (Akademischer Rat auf Lebenszeit)   since 2023

LMU Munich, Research scientist (Akademischer Rat auf Zeit)   Jan 2018 — Jun 2022

Argonne National Laboratory, Postdoctoral researcher   2016 — 2018
KICP University of Chicago, Associate fellow

LMU Munich, Postdoctoral researcher   July 2015 — Dec 2015

LMU Munich, PhD in Astrophysics, *magna cum laude*   2011 — 2015
Thesis: *Galaxy Cluster Cosmology*, Advisor: Prof. Dr. J. Mohr

LMU Munich, Diploma in Physics, *with highest honors*   2005 — 2011
Thesis: *The Dark Higgs Portal*, Advisor: Prof. Dr. S. Hofmann

ENSPG Grenoble (ERASMUS exchange student)   2007/2008

RESEARCH INTERESTS

- Analysis of cosmological survey data (South Pole Telescope, Dark Energy Survey, eROSITA, *Euclid*, Rubin/LSST, CMB-S4)

- Galaxy cluster cosmology and astrophysics, gravitational lensing

- Structure formation and numerical cosmological N-body and hydrodynamic simulations

- Statistics and Machine Learning: Bayesian parameter inference, Gaussian process interpolation for emulators, neural networks for source finding

MANAGEMENT AND LEADERSHIP ACTIVITIES

Coordinator of the Astrophysics Masters program at LMU   since 2024

Member of the Dark Energy Survey publication board   since 2024

Euclid consortium: Co-lead of Cluster Likelihood work package   since 2024

Co-convener of the DES Clusters working group (Dark Energy Survey)   2020—2024

Diversity, Equity, Inclusion committee (Dark Energy Survey)   2021—2023

Co-lead of the DES cluster cosmology analysis team (Dark Energy Survey)   2019/2020

Co-lead of the DESxCMB cluster analysis team (Dark Energy Survey)   2019–2021

SELECT ACTIVITIES

Lead organizer for international workshop at MIAPbP (Garching, Germany)   2022
https://www.munich-iapp.de/cosmology22

ORIGINS—Cluster of Excellence https://www.origins-cluster.de/en/   since 2018
Large-Scale Structure, Dark Energy, Dark Matter

Part of OC of Argonne HEP *Young Scientist Symposium Series*   2017

Journal Referee (ApJ, A&A, JCAP, MNRAS)   since 2015

INTERNATIONAL COLLABORATIONS

Euclid consortium   Since 2020
Next-generation optical/NIR space-based cosmological survey

CMB-S4 collaboration   since 2016
Next-generation millimeter-wave cosmological survey

Vera C. Rubin/LSST Dark Energy Science Collaboration (DESC)   since 2016
Next-generation optical cosmological survey

Dark Energy Survey collaboration   since 2013
State-of-the-art optical cosmological survey

South Pole Telescope collaboration   since 2011
State-of-the-art millimeter-wave cosmological survey

eROSITA DE consortium   2012 — 2015; 2018 — 2022
Leading X-ray cosmological survey (early data analysis)

TALKS AND PRESENTATIONS

Invited Talks: Conferences & Colloquia

Physics Colloquium, Ruhr-Universität Bochum, Germany   2024

20th Rencontres du Vietnam   2024
29th International Symposium on Particles, Strings, and Cosmology (PASCOS)

Noirmoutier, France   2024
Exploring the Dark Side of the Universe — Tools

Flatiron Institute, New York City, USA   2022
Sunyaev-Zel'dovich Science in the 2020s: Connecting Theory, Simulations, and Observations

ESA (ESAC) Madrid, Spain   2021
A Multi-Wavelength View of Galaxy Clusters

LSST-Athena synergies workshop   2021

Trieste, Italy   2020
Dissecting Cluster Cosmology (postponed due to Covid-19 pandemic)

Sexten CfA, Italy   2020
Hot Topics in Astrophysics II (cancelled due to Covid-19 pandemic)

University Observatory Munich (USM/LMU), Germany   2020
Institute Colloquium

APC Paris, France   2019
Towards Coordination of the European CMB program

Sexten CfA, Italy   2019
Tracing Cosmic Evolution with Galaxy Clusters

University of Sussex, UK   2019
Astronomy Colloquium

ICTS Bangalore, India   2019
Cosmology — The Next Decade

Jena University, Germany   2018
German Long Wavelength Consortium Annual Assembly

Kavli Institute for Cosmology, Cambridge, UK	2018
Consistency of cosmological datasets: Evidence for new physics?	
Max Planck Institute for Astrophysics, Germany	2013
Return of de Sitter II	

Select Invited Talks: Seminars

Universität Innsbruck, Austria	2024
Joint Institute Seminar	
University of Cambridge, UK	2023
Cosmology Lunch	
Institut d'Astrophysique Spatiale, Orsay, France	2022
Cosmo-seminar	
University of Trieste, Italy	2020
Astrophysics Seminar	
MIT, Cambridge, USA	2020
Astronomy Lunch talk	
University of Michigan, Ann Arbor, USA	2017
Astronomy Seminar	
CfA Harvard, Cambridge, USA	2016
Galaxies & Cosmology Seminar	
Fermilab, Batavia, USA	2016
Astrophysics Seminar	
Max Planck Institute for Astrophysics (MPA), Garching, Germany	2015
High Energy seminar	
Max Planck Institute for Extraterrestrial Physics (MPE), Garching, Germany	2015
Optical and Interpretative Astronomy (OPINAS) seminar	

Select Contributed Talks: Conferences and Workshops

Frontiers in in Cosmology and Gravitational Physics, Portsmouth, UK	2024
Observing the mm Universe, Grenoble, France	2023
Neutrino Cosmology Day, Garching, Germany	2022
mm Universe @ NIKA2, Rome, Italy (remote)	2021
KICC 10th Anniversary Symposium, Cambridge, UK	2019
CMB in Germany, MPA Garching, Germany	2018
Clusters 2017, Santander, Spain	2017
COSMO-16, Ann Arbor, USA	2016
SnowCluster, Snowbird Utah, USA	2015
Cosmology with galaxy clusters in the XXI century, Madrid, Spain	2014

OUTREACH

Guest at SPACETIME TV show	2024

Workshop for school teachers in science   2024
Akademie für Lehrerfortbildung und Personalführung, Dillingen

Café & Kosmos cafeundkosmos.de   2024

Adler Planetarium, Chicago, adlerplanetarium.org   throughout 2017
Astronomy Conversations