

# CURRICULUM VITAE

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Ludwig-Maximilians University (LMU) Munich, Faculty of Physics  
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## EDUCATION AND ACADEMIC APPOINTMENTS

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<b>LMU Munich</b> , Physicist, faculty member (Akademischer Rat auf Lebenszeit)	July 2022
<b>LMU Munich</b> , Research scientist (Akademischer Rat auf Zeit)	Jan 2018 — Jun 2022
<b>Argonne National Laboratory</b> , Postdoctoral researcher	2016 — 2018
<b>KICP University of Chicago</b> , Associate fellow	
<b>LMU Munich</b> , Postdoctoral researcher	July 2015 — Dec 2015
<b>LMU Munich</b> , PhD in Astrophysics, <i>magna cum laude</i> Thesis: <i>Galaxy Cluster Cosmology</i> , Advisor: Prof. Dr. J. Mohr	2011 — 2015
<b>LMU Munich</b> , Diploma in Physics, <i>with highest honors</i> Thesis: <i>The Dark Higgs Portal</i> , Advisor: Prof. Dr. S. Hofmann	2005 — 2011
<b>ENSPG Grenoble</b> (ERASMUS exchange student)	2007/2008

## RESEARCH INTERESTS

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- Analysis of cosmological survey data (South Pole Telescope, Dark Energy Survey)
- Preparation and forecasting for upcoming surveys (eROSITA, Rubin/LSST, Euclid, CMB-S4)
- Galaxy cluster cosmology and astrophysics
- 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

## MAJOR COLLABORATIONS

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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	
eROSITA DE consortium	2012 — 2015; 2018 — present
Leading X-ray cosmological survey (early data analysis)	
South Pole Telescope collaboration	since 2011
State-of-the-art millimeter-wave cosmological survey	

## MANAGEMENT AND LEADERSHIP ACTIVITIES

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Coordinator of the Astrophysics Masters program at LMU	since 2024
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Euclid consortium: Co-lead of Cluster Likelihood work package	since 2024
Diversity, Equity, Inclusion committee (Dark Energy Survey)	2021—2023
Co-convener of the DES Clusters working group (Dark Energy Survey)	2020—2024
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

## OTHER ACTIVITIES

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Lead organizer for international workshop at MIAPbP (Garching, Germany) <a href="https://www.munich-iapp.de/cosmology22">https://www.munich-iapp.de/cosmology22</a>	2022
ORIGINS—Cluster of Excellence <a href="https://www.origins-cluster.de/en/">https://www.origins-cluster.de/en/</a> Large-Scale Structure, Dark Energy, Dark Matter	since 2018
Part of OC of Munich-area <i>Code Coffee</i> Sessions	2019
Part of OC of Argonne HEP <i>Young Scientist Symposium Series</i>	2017
Journal Referee (ApJ, A&A, MNRAS)	since 2015

## TALKS AND PRESENTATIONS

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### Invited Talks: Conferences & Colloquia

20th Rencontres du Vietnam	2024
29th International Symposium on Particles, Strings, and Cosmology (PASCOS)	
Noirmoutier, France	2024
<i>Exploring the Dark Side of the Universe — Tools</i>	
Flatiron Institute, New York City, USA	2022
<i>Sunyaev-Zel'dovich Science in the 2020s: Connecting Theory, Simulations, and Observations</i>	
ESA (ESAC) Madrid, Spain	2021
<i>A Multi-Wavelength View of Galaxy Clusters</i>	
LSST-Athena synergies workshop	2021
Trieste, Italy	2020
<i>Dissecting Cluster Cosmology</i> (postponed due to Covid-19 pandemic)	
Sexten CfA, Italy	2020
<i>Hot Topics in Astrophysics II</i> (cancelled due to Covid-19 pandemic)	
University Observatory Munich (USM/LMU), Germany	2020
<i>Institute Colloquium</i>	
APC Paris, France	2019
<i>Towards Coordination of the European CMB program</i>	
Sexten CfA, Italy	2019
<i>Tracing Cosmic Evolution with Galaxy Clusters</i>	
University of Sussex, UK	2019
<i>Astronomy Colloquium</i>	
ICTS Bangalore, India	2019
<i>Cosmology — The Next Decade</i>	
Jena University, Germany	2018
<i>German Long Wavelength Consortium Annual Assembly</i>	

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

### Select Invited Talks: Seminars

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

### Select Contributed Talks: Conferences and Workshops

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

### PUBLIC OUTREACH

Café & Kosmos <a href="http://cafeundkosmos.de">cafeundkosmos.de</a>	2024
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Adler Planetarium, Chicago, [adlerplanetarium.org](http://adlerplanetarium.org)  
*Astronomy Conversations*

throughout 2017