

# CURRICULUM VITAE

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## EDUCATION AND ACADEMIC APPOINTMENTS

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| <b>LMU Munich</b> , Physicist, faculty member (Akademischer Rat auf Lebenszeit)  | since 2023           |
| <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><br>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><br>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, 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

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| Coordinator of the Astrophysics Masters program at LMU                  | since 2024 |
| Member of the Dark Energy Survey publication board                      | since 2024 |
| <i>Euclid</i> consortium: Co-lead of Cluster Likelihood work package    | since 2024 |
| Co-convenor 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

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| Lead organizer for international workshop at MIAPbP (Garching, Germany)<br><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><br>Large-Scale Structure, Dark Energy, Dark Matter   | since 2018 |
| Part of OC of Argonne HEP <i>Young Scientist Symposium Series</i>  | 2017       |

Journal Referee (ApJ, A&amp;A, JCAP, MNRAS)

**INTERNATIONAL 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                |                          |
| 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**


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| Physics Colloquium, Ruhr-Universität Bochum, Germany   | 2024 |
| Main Colloquium, MPIfR, Bonn, Germany  | 2024 |
| Institut Pascal, Paris-Saclay, France  | 2024 |
| <i>AstroParticle Symposium 2024</i>  |      |
| 20th Rencontres du Vietnam   | 2024 |
| <i>29th International Symposium on Particles, Strings, and Cosmology (PASCOS)</i>                |      |
| Noirmoutier, France  | 2024 |
| <i>Exploring the Dark Side of the Universe — Tools</i>   |      |
| ESO, Garching, Germany   | 2024 |
| <i>Munich Joint Astronomy Colloquium</i>   |      |
| Institut Pascal, Paris-Saclay, France  | 2022 |
| <i>AstroParticle Symposium 2022</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>  |      |

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| Sexten CfA, Italy<br><i>Tracing Cosmic Evolution with Galaxy Clusters</i>  | 2019 |
| University of Sussex, UK<br><i>Astronomy Colloquium</i>  | 2019 |
| ICTS Bangalore, India<br><i>Cosmology — The Next Decade</i>  | 2019 |
| Jena University, Germany<br><i>German Long Wavelength Consortium Annual Assembly</i>                                   | 2018 |
| Kavli Institute for Cosmology, Cambridge, UK<br><i>Consistency of cosmological datasets: Evidence for new physics?</i> | 2018 |
| Max Planck Institute for Astrophysics, Germany<br><i>Return of de Sitter II</i>  | 2013 |

### Select Invited Talks: Seminars

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

### Select Contributed Talks: Conferences and Workshops

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| <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 |

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| <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 |

#### **OUTREACH**

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| Guest at SPACETIME TV show   | 2024            |
| Workshop for school teachers in science<br><i>Akademie für Lehrerfortbildung und Personalführung, Dillingen</i>              | 2024            |
| Café & Kosmos <a href="http://cafeundkosmos.de">cafeundkosmos.de</a>   | 2024            |
| Adler Planetarium, Chicago, <a href="http://adlerplanetarium.org">adlerplanetarium.org</a><br><i>Astronomy Conversations</i> | throughout 2017 |