

# Curriculum Vitae

## Personal information

**Küffmeier, Michael**

ORCID: 0000-0002-6338-3577

E-Mail: [kueffmeier@nbi.ku.dk](mailto:kueffmeier@nbi.ku.dk)

URL for website: [www.kuffmeier.com](http://www.kuffmeier.com)

## • Education

2017 PhD in astrophysics; Title: '*Accretion processes in star formation*', Niels Bohr Institute (NBI), University of Copenhagen, **Supervisor:** Prof. Åke Nordlund (obtained: 10/2017)

2014 Master of Science in Physics, NBI, University of Copenhagen, Denmark

## • Current and previous academic employment

2023 – 2025 Carlsberg Reintegration Fellowship at NBI, University of Copenhagen, DK

2020 – 2023 Marie Skłodowska-Curie Global Fellow at University of Virginia in Charlottesville (UVa), USA, and Max-Planck-Institute for Extraterrestrial Physics (MPE), Munich-Garching, Germany including a 6-month secondment period at NBI (10/2020 – 03/2021)

2018 – 2020 Postdoctoral fellow at Institute for Theoretical Astrophysics (ITA), Heidelberg University, Germany (*until June 2018* as postdoc for Research Unit Transition Disk under Co-I Prof. Dullemond; **since July 2018 as independent postdoc financed by own grant**)

2017 Research assistant at NBI, Copenhagen, Denmark, after submission of PhD

## • Fellowships and Awards

*Accepted offers:* **Carlsberg Reintegration Fellowship** at University of Copenhagen, DK ('23-'25), **Marie Skłodowska-Curie Global Fellowship** at UVa and MPE, USA/Germany ('20-'23; score: **96.80 %**), **DFF-International Postdoctoral Grant** of Independent Research Fund Denmark ('18-'20)

*Declined offers:* VICO Fellowship at UVa, USA; CITA National Fellowship, Canada; CAS fellowship at MPE Garching, Germany; National IAF fellowship in Florence, Italy

Award for **best PhD thesis in Danish Astronomy** of the year 2017

## • Computing allocation

2022 Co-I PRACE (40M core-hours; PI: Johansen) & EuroHPC (24M core-hours; PI: Haugbølle)

2016 Co-I PRACE (22M core-hours; PI: Haugbølle)

## • Management experience

Since 2017 **Management of own research projects and grants since year 1 after obtaining my PhD**

2021 Co-organizer of virtual EAS session '*Streamers: thinking outside the planet-forming disk*'

2021 Session chair of 'Origins of cores and IMF' at virtual winter meeting of AAS

2015 Local organizer for off-lecture activities of '*Summer School on Protoplanetary Disks and Planet Formation*' at Niels Bohr International Academy, Denmark

## • Reviewing Activities

2019 – Reviewer for AAS journals (including ApJ), A&A, MNRAS & Nature Astronomy

- **Brief description of research activity and major achievements**

Star and planet formation, magnetohydrodynamics (MHD):

- 3D magnetohydrodynamical zoom-in simulations with the RAMSES code (FORTRAN) of protostars demonstrating that star formation is heterogeneous in space and in time
- Predicting the presence of ‘streamers’, which have been observed with modern telescopes
- Co-development of DISPATCH (FORTRAN), foremost implementing a non-ideal MHD module
- Investigating infall in hydrodynamical simulations with the AREPO code (C) and put constraints on dust polarization as a tracer of magnetic fields using the POLARIS code (C)

- **International Collaborations**

Copenhagen (Haugbølle, Nordlund, Johansen, Jørgensen), Heidelberg (Dullemond, Reißl), Munich (Caselli, Pineda, Miotello), Virginia (Li, Cleeves), Nice (Winter, Benisty) and Japan (Yang).

- **Supervision and mentoring**

- 2023 – Supervisor (with Haugbølle and Lambrechts) of Master student Christian G. Holm
- 2022 – Committee member and co-supervisor of PhD students Aashish Gupta (supervisor: Miotello) and Farideh S. Tabatabaei Mazraeh No (supervisors: Caselli & Redaelli)
- 2022 Supervisor of students Temidayo Akinbi and Louis Seyfritz at UVa (12 weeks)
- 2021 – Mentor of PhD students Harshita Bhat (Max-Planck-Institute for Radioastronomy Bonn), Svenja Wild (University of Cologne) and Simran Kaur (UVa)
- 2021 – 2022 Supervision of summer project and thesis project of Hannah Woodward at UVa

- **Membership of Scientific Societies**

Member of American Astronomical Society (AAS), European Astronomical Society (EAS), German Physical Society (DPG)

- **Outreach and other Activities**

- 2021 – Mentor of [‘Erste Generation Promotion Mentoring+’](#) for PhD students from non-academic family backgrounds
- 2015 – 2017 Support for high-school students with immigrant backgrounds for Danish Refugee Council in Copenhagen, Denmark
- 2014 – 2016 Writing 23 and editing 24 articles accessible to undergraduates for [‘astrobites.org’](#)

- **Further Research Experience and additional info**

- 2023 Initiator of MIAPbP proposal on planet formation across various environments
- 2021 Invitation to **phase 2 of the ERC StG**
- 2021 – Co-I of 9 accepted ALMA and NOEMA proposals
- 2016 Visiting research group of Prof. Tomida at University of Osaka, Japan, for 3 months
- 2015 Observing at Danish Telescope in LaSilla, Chile (two weeks), and member of MINDSTEp consortium (Microlensing Network for the Detection of Small Terrestrial Exoplanets)

- **Conferences and Talks**

Conferences, workshops & seminars: > 75 in total; **>30 invited**

October 25th, 2023