

Prof. Dr. Katja Poppenhäger

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RESEARCH TOPICS

Observational astrophysics – Interactions of stars and exoplanets – Physics of low-mass stars
Stellar magnetic activity – Exoplanetary atmospheres

PROFESSIONAL EXPERIENCE

<i>Director for Stellar, Solar and Exoplanetary Physics</i> Leibniz Institute for Astrophysics Potsdam (AIP), Germany	since Nov. 2024
<i>Professor for Stellar Physics and Exoplanets</i> Leibniz Institute for Astrophysics Potsdam (AIP), Germany	since 2018
<i>Lecturer (Assistant Professor) in Astrophysics</i> Queen's University Belfast, UK	2015 – 2018
<i>Sagan Postdoctoral Prize Fellowship holder</i> Harvard-Smithsonian Center for Astrophysics (CfA), Cambridge, USA	2013 – 2015
<i>Postdoctoral fellow</i> Harvard-Smithsonian Center for Astrophysics (CfA), Cambridge, USA	2012 – 2013
<i>Postdoctoral fellow</i> Hamburg Observatory, Germany	2011 – 2012
<i>Scientist and project manager (pre-PhD)</i> Environmental Protection Encouragement Agency, Hamburg, Germany	2005 – 2007

EDUCATION

<i>PhD in Astrophysics</i> , Hamburg University, Germany Thesis “Magnetic activity of planet-hosting stars”, magna cum laude, advisor Prof. Dr. J.H.M.M. Schmitt	2011/05
<i>Diplom (MSc.) in Physics</i> , Goethe University Frankfurt, Germany Thesis “The Casimir effect in space-times with compactified extra dimensions”, advisor Prof. Dr. H. Stöcker	2004/02

PUBLICATIONS

Please refer to my ADS library, which includes alternate spellings of my last name, accessible at <https://ui.adsabs.harvard.edu/public-libraries/TkluxdHbTMGPTyNlz-oEfg>.

FUNDING SUMMARY

Total external research funding: ca. 4.5 million EUR granted to date, mainly in a Principal Investigator role.

Notable grants include my ERC Consolidator Grant “Evaporator” (2025-2030, 2 Mio. EUR) and my Leibniz Competition Women Professors Program “CESSY” (2018-2023, 1 Mio. EUR).

TEACHING

Regular teaching duties since 2016 including undergraduate and graduate courses on topics like exoplanets, stellar structure and evolution, computational physics, and women’s contributions to astronomy. Postgraduate Certificate in Higher Education Teaching completed at Queen’s University Belfast in 2017. Short-term reduction in teaching load since starting my directorial role in Nov. 2024.

PhD STUDENTS

Ilaria Civale; PhD thesis “Stellar high-energy spectra and their influence on exoplanets”, U Potsdam	since 2025
Desmond Dsouza; PhD thesis “Stellar coronal activity evolution”, U Potsdam	since 2023
Judy Chebly; PhD thesis “An inside out view of the coronae and winds of cool stars”, U Potsdam	2020 - 2024
Laura Ketzer; PhD thesis “The impact of stellar activity evolution on atmospheric mass loss of young exoplanets”, U Potsdam	2019 - 2024
Nikoleta Ilic; PhD thesis “Stars under influence: evidence of tidal interactions between stars and substellar companions”, U Potsdam	2019 - 2023
Ekaterina Ilin; PhD thesis “High lights: stellar flares as probes of magnetism in stars and star-planet systems”, U Potsdam	2018 - 2022
Dr. Ilin was awarded the <u>2024 Publication Prize of the Leibniz Kolleg</u> for her research conducted in Potsdam.	
Grace Foster; PhD thesis “X-ray studies of exoplanet systems”, U Potsdam	2019 - 2022
Robert Wells; PhD thesis “The properties of transiting exoplanets”, Queen’s University Belfast	2016 - 2020
Rachel Booth; PhD thesis “The magnetic activity evolution of main sequence cool stars”, Queen’s University Belfast	2015 - 2019

INVITED TALKS AT CONFERENCES AND INSTITUTES

Invited conference talks (selected)

“The physics of exoplanets and their host stars revealed by X-ray observations”, Chandra 25th Anniversary Symposium, Boston, USA	Dec. 2024
“An X-ray view of exoplanets and their host stars”, First eROSITA Science Conference, Munich, Germany	Sep. 2024
“Star-Planet Interactions”, EAS Annual Meeting, Krakow, Poland	Jul. 2023
“Young exoplanet evolution in the V1298 Tau system”, Heraeus Meeting, Bad Honnef, Germany	Jan. 2023

“Understanding the evolution of star-planet systems”, Annual meeting of the German Astronomical Society, Stuttgart, Germany	Sep. 2019
“The interplay of exoplanets and stellar activity: how it influences atmospheres of stars and planets”, Sino-German Exoplanet Workshop, Hamburg, Germany	Jul. 2019
“How planets affect cool stars”, Cool Stars 20 conference, Boston, USA	Jul. 2018
“How stars and planets interact: a look through the high-energy window”, XMM-Newton 2018 Science Workshop, Madrid, Spain	Jun. 2018
“Stellar ages as the key to exoplanet evolution”, Ages ² – Taking Stellar Ages to the next Power, Elba, Italy	Sep. 2017
“Stellar activity and planet characterization”, Ringberg conference on Atmospheres of Disks and Planets, Castle Ringberg, Germany	Apr. 2017
“Interactions between exoplanets and their host stars”, Exoplanets – Bridging the Gap between Theory and Observations, Bad Honnef, Germany	Nov. 2016
“X-rays revealing the physics of exoplanets”, The X-ray Surveyor Conference, Washington DC, USA	Oct. 2015
“Stars and exoplanets: interaction, rotation, activity”, Stellar and Planetary Dynamos Conference, Göttingen, Germany	May 2015
“The Interactions of Exoplanets with their Parent Stars”, American Astronomical Society Meeting 225, Seattle, USA	Jan. 2015

Invited seminars and colloquia (selected)

Colloquium & Seminar, LMU, Munich, Germany	May 2025
Seminar, ESA’s Athena Webinar (virtual)	Sep. 2024
Colloquium, Max Planck Institute for Solar System Science, Göttingen, Germany	May 2024
Seminar, DLR Adlershof, Germany	Mar. 2024
Seminar, DESY Zeuthen, Germany	Feb. 2024
ESA faculty seminar, ESAC/ESTEC (virtual), Netherlands	May 2023
IAU commission E4 seminar, ESO (virtual), Chile	Apr. 2022
MPE institute seminar, Munich (virtual), Germany	Feb. 2022
LISA consortium meeting #9, workshop on unconscious bias in academia (virtual), USA	June 2021
DLR Berlin, Exoplanet seminar (virtual), Germany	Feb. 2021
Brno University, Astrophysics seminar (virtual), Czech Republic	Nov. 2020
Landessternwarte Tautenburg, Colloquium (virtual), Germany	Nov. 2020
Keele University, Astrophysics seminar (virtual), UK	Nov. 2020
Stockholm University, Astrophysics seminar, Sweden	Sep. 2019
University of Amsterdam, Astronomy seminar, Netherlands	Nov. 2018
Liverpool John Moores University, Astrophysics seminar, UK	Mar. 2018
University of Southampton, Astrophysics seminar, UK	Feb. 2018
University of Warwick, Astronomy seminar, UK	Oct. 2017
University of Leeds, Astronomy seminar, UK	Oct. 2017
Hamburg Observatory, Colloquium, Germany	Dec. 2016
University of St. Andrews, Exoplanet seminar, UK	Mar. 2016
Edinburgh Royal Observatory, Astronomy seminar, UK	Mar. 2016
MIT, Colloquium, Cambridge, USA	Sep. 2015
University of Massachusetts Amherst, Colloquium, USA	Apr. 2015
MPIA Heidelberg, Planet and Star Formation Seminar, Germany	Apr. 2015
Columbia University, Colloquium, New York, USA	Feb. 2015

ACADEMIC SERVICE

Work on major strategic committees

Member of ELT-ANDES Executive Board	since 2024
Member of ELT-ANDES Steering Committee	2022 - 2024
Member of ESA's Astronomy Working Group	2020 - 2023
Member of ESA's Scientific Advisory Panel (F and M class missions down-selection)	2022
Co-Chair of AIP's Future Committee (strategic planning for the next decade)	2019 - 2022

Large collaborations

PI of ANDES-UBV, the blue-visible spectrograph subsystem of the ELT-ANDES spectrograph	since 2022
Member of ELT-ANDES Working Group "Exoplanets and protoplanetary disks"	since 2022
Science Team Collaborator of CHEOPS space telescope	since 2024
Science Team Member of WideField Spectroscopic Telescope project	since 2022
Member of eROSITA Working Group "Stars"	since 2019
White Paper contributor to X-ray Interferometry mission concept for ESA's Voyage2050 program	2018
Member of NewAthena Science Working Group "Stars and their environments" since 2025	Member of Athena Science Working Group "Solar System and Exoplanets" 2016 - 2024

Conference organizing (selected)

Chair of the SOC, Thinkshop conference on High-resolution spectroscopy for exoplanet atmospheres and biomarkers, Potsdam (in-person plus virtual)	Sept. 2022
Chair of the SOC, XMM-Newton workshop on A High-Energy View of Exoplanets and their Environments (virtual)	May 2021
One of four organizers, KITP Exostar Reunion conference (virtual)	Aug. 2020
One of four organizers, KITP Exostar program (3-month research retreat for international astrophysicists plus 1-week conference), Santa Barbara, USA	May - July 2019

Refereeing and reviewing

Referee for academic journals: A&A, MNRAS, ApJ, Nature, Science, Astronomische Nachrichten
 Reviewer on time allocation committees: XMM-Newton, Chandra, HST, Opticon
 Reviewer for funding agencies: DFG and DLR (Germany), STFC (UK), NSF (USA), FWF (Austria), IRC (Ireland), ERC (Europe)

Diversity/inclusion/equity, policy, and leadership initiatives

Ombudsperson for Good Scientific Practice at AIP	2022 - 2024
Participant in Leibniz Academy program "Führung leben"	2021 - 2022
Presenter and organizer of "Astrocareers & Diversity" workshops at Potsdam University	since 2019
Organizer of unconscious bias awareness training at Queen's University Belfast	2015 - 2018

PUBLIC OUTREACH

selected items:

- Public outreach talk in the "Babelsberger Sternennächte" series, topic: "Das heiße und hochenergetische Universum - 25 Jahre XMM-Newton", Potsdam, Germany Dec. 2024
<https://www.youtube.com/watch?v=T97xJ3gshA4>
- Interview in Süddeutsche Zeitung Magazin, title "Ich bin mir sicher, dass es Leben gibt im All", Oct. 2023
<https://sz-magazin.sueddeutsche.de/wissen/weltall-tiefsee-leben-interview-forscherinnen-klimakrise-93210>
- Panelist in radio show "Forum Wissenswerte" of rbb24 Inforadio, topic "Wir sind nicht allein: Die Suche nach Leben auf Exoplaneten" Feb. 2023
- Public outreach talk in the "Babelsberger Sternennächte" series, virtual recorded talk, topic "Planets around other stars - from exotic to Earth-like", Dec. 2020
<https://youtu.be/oht890ufy-Q>
- Public outreach talk in the "Babelsberger Sternennächte" series, topic: "Other worlds – a walk through the exoplanet zoo", Potsdam, Germany Nov. 2019
- TEDx talk "Is there a new Earth out there?", Klagenfurth, Austria, Oct. 2016
<https://www.youtube.com/watch?v=MFegyFv9WqY>