

Alison M. W. Mitchell

Friedrich-Alexander-Universität Erlangen-Nürnberg
Erlangen Centre for Astroparticle Physics
Nikolaus-Fiebiger-Str. 2
91058 Erlangen
Germany

Nationality: British
ORCID 0000-0003-3631-5648
alison.mw.mitchell@fau.de
www.amwmitchell.com

Employment

01/10/2021 – present	DFG Emmy Noether Group Leader at ECAP, FAU Erlangen-Nürnberg
01/01/2021 – 31/08/2021	Postdoc at the ETH Zurich
01/08/2018 – 31/12/2020	Postdoc at the University of Zurich
01/08/2016 – 31/07/2018	Postdoc at Max-Planck-Institut für Kernphysik, Heidelberg (33% employment)
01/08/2016 – 31/07/2018	Assistant to the Project Scientist (Prof. J. Hinton) of the Cherenkov Telescope Array, CTAO gGmbH (67% employment)

Education

01/09/2013– 28/07/2016	PhD in Physics (Magna cum Laude), University of Heidelberg, Germany Supervisor: Prof. Dr. W. Hofmann, Max-Planck-Institut für Kernphysik, Heidelberg Thesis Title: “ <i>Optical Efficiency Calibration for Inhomogeneous IACT Arrays and a Detailed Study of the Highly Extended Pulsar Wind Nebula HESS J1825-137</i> ”
09/2008 – 07/2013	BSc MPhys (Hons) in Physics with First Class Honours, University of Warwick, UK

Awarded Grants and Prizes

November 2024	Helga-Kersten prize of the Faculty of Science, FAU Erlangen-Nürnberg – 30k€
September 2022	BAYLAT / FAPESP “ <i>Astroparticle physics in the era of CTA and SWGO</i> ” Grant number: 2022/01271-7
October 2021	DFG Emmy Noether Grant, Project Number 452934793, MI 2787/1-1 Project title: “ <i>Unveiling the Origin of Galactic Cosmic Rays: Exploring Pulsar Environments at the Highest Energies</i> ”
November 2020	Recipient of the H.E.S.S. Prize for “outstanding service contributions to the experiment”.
November 2019	University of Zurich Travel Grant for a research visit to University of Adelaide, Australia

Supervision: Current Group Members

Dr. Samuel Spencer	Postdoctoral researcher (since April 2022)
Tina Wach	PhD student (since May 2022)
Giovanni Cozzolongo	PhD student (since October 2023)
Katharina Egg	PhD student (since November 2023)
Darius Grüber	Master thesis (since March 2024)
Kavan Purohit	Master thesis (since April 2024)
Saujanya Dubale	Master thesis (since May 2024)
Sayak Ghosh	Master thesis (since November 2024)

Teaching

Summer 23 – present	Lecturer for <i>Physics of Stars</i>
2024 – present	Lecturer for <i>Physics II</i> for BSc <i>Clean Energy Processes</i>
October 2024	Lecturer on Gamma-ray Astronomy for the Erlangen Astroparticle school
June 2024	Tutorial on Observation Proposals for the CTAO graduate school
Winter 23/24	Lecturer for <i>Physics I</i> for BSc <i>Clean Energy Processes</i>
Winter 22/23	Lecturer for <i>Methods of Data Analysis II</i>
09/06/2022	Cover lecturer for <i>Methods of Data Analysis I</i>
Spring 2020	Lecturer for <i>Experimental Astroparticle Physics</i> : 4 out of 12 lectures
25/03/2020	Guest lecture for <i>Nuclear and Particle Physics II</i>
2019	Tutor for Physics III (modern physics), UZH (in German)
2018 – 2019	Tutor for the physics lab for medicine students, UZH (in German)
2013 – 2014	Tutor for undergraduate Introduction to Astrophysics I, Heidelberg (in German)

Other Activities

Scientific Collaborations	Member of the H.E.S.S. collaboration since 2013 Member of the CTA Consortium since 2014 Member of the SWGO collaboration since 2019 Member of the FACT collaboration during 2021
Working Group Coordination	H.E.S.S. Day Shift Coordination (2020-2021) CTA Analysis and Simulations Working Group (2021–2022) SWGO Galactic task force coordinator (since 2020) PI for Novae observations with H.E.S.S. (since 2016)
Peer Review	DFG funding proposals
Journal peer review	Astronomy & Astrophysics; Astroparticle Physics; Nature Astronomy; Monthly Notices of the Royal Astronomical Society; Physical Review D; Journal of Cosmology and Astroparticle Physics; Journal of High Energy Astrophysics; The Astrophysical Journal.
External Review	Scientific secretary for an external review of CTA SSTs (2019)
Scientific Meeting Organisation	SOC for special session on intensity interferometry at IAU 2024 SOC for special session on PeVatrons at EAS 2024 SOC for Gamma-ray Astronomy at ECRS 2024 SOC for RICAP-2022 LOC for the Erlangen Astroparticle School since 2022
Invited Talks	invited seminars (~ 9 since 2017) invited conference contributions (~ 14 since 2019) outreach talks to school groups or the general public (since 2022) one in English (in the UK) and four in German, including a talk with Haus der Astronomie https://youtu.be/o88-8hLWbCw

Programming: Good knowledge of C/C++ and python

Languages: English - native, German - fluent (C2)

Supervision: Completed Theses

Lukas Großpietsch (BSc 2024)	<i>“Analysis of the IC 443 Supernova Remnant with H.E.S.S. Data”</i>
Tobias Müller (BSc, 2024)	<i>“Disentangling Enigmatic Gamma-Ray Sources”</i>
Mario Engelmann (MSc, 2023)	<i>“Potential Detectability of Gamma-Ray Halos Around Spiral Galaxies”</i>
Thomas Lang (MSc, 2023)	<i>“Satellite Trails in H.E.S.S. Data”</i>
Nick Scharrer (BSc, 2022)	<i>“Modelling Gamma-Ray Spectra of SNRs to predict their Detectability by SWGO”</i>
Darius Grüber (BSc, 2022)	<i>“Analysis and interpretation of three composite VHE gamma-ray sources”</i>
Javier Gomez de la Gandara	Exchange student (Universidad de Cantabria) co-supervision
- Perez (BSc 2020)	<i>“Predicting the future Pulsar Wind Nebula Population in the TeV Sky”</i>

Supervision: Student Projects

Jakob Bickel (2024, FAU)	Work experience: <i>“Searching the HESS archive for serendipitous observations of novae”</i>
Hannes Warnhofer (2023, FAU)	Internship: <i>“Multi-view Deep Learning for IACTs”</i>
Derin Wilson (2022, FAU)	Exchange student co-supervision: <i>“Analysis of very high energy gamma-ray emission in the region of HESS J1828-099”</i>
Vanessa Guthier (2022, FAU)	EU Contest for Young Scientists: <i>“A Solution for the Enigma of γ-Rays: Star Clusters Creating Gamma Sources”</i> - ESO Prize-winning project
Momoka Goto (2020, UZH)	Exchange student: <i>“Muon Calibration algorithms for CTA”</i>

Alison M. W. Mitchell

Third party funding

Funding Source: Deutsche Forschungsgemeinschaft (DFG) Emmy Noether Programme

Project number: 452934793

Role: Principal Investigator

Dates: October 2021 – September 2027

Title: *“Unveiling the Origin of Galactic Cosmic Rays: Exploring Pulsar Environments at the Highest Energies”*

Amount: 1.5 M€

Funding Source: Bavarian Academic Center for Latin America (BAYLAT) & State of São Paulo Research Foundation (FAPESP)

Grant number: 2022/01271-7

Role: Co-applicant

Dates: August 2022 – July 2024

Title: *“Astroparticle Physics in the era of CTA and SWGO”*

Amount: 32k€