

Robert STEIN

PERSONAL DATA

PLACE AND DATE OF BIRTH: London | 10 June 1995
NATIONALITY: British & Irish
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EDUCATION

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| JULY 2017 –
DEC. 2020 | <p>PhD in EXPERIMENTAL PHYSICS,
Humboldt University of Berlin / DESY Zeuthen
Thesis: “<i>Search for multi-messenger sources of neutrinos and gravitational waves</i>” (in prep.)
Research Advisor: A. FRANCKOWIACK</p> <ul style="list-style-type: none">• Cross-correlation of neutrinos with multi-wavelength catalogues• Led response to neutrino alerts as the <i>IceCube realtime shifter</i>• ZTF follow-up of neutrino/gravitational wave/GRB events |
| SEP. 2013 –
JUNE 2017 | <p>MSci in PHYSICS WITH A YEAR IN EUROPE,
Imperial College London / University of Hamburg
Thesis: “<i>Reconstruction of Charge Number of Heavy Cosmic Rays using Cherenkov Light</i>”
Research Advisor: D. HORNS (University of Hamburg)
Graduated with First Class Honours</p> <ul style="list-style-type: none">• Development of novel reconstruction method for heavy cosmic rays detected by IACTs, using direct Cherenkov light• Estimates of performance for simulated CTA geometries |

SELECTED TALKS

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| 14 TH OCT. 2020 | <p>INVITED TALK, ASTRON Astrolunch, Dwingeloo, NL
“<i>A high-energy neutrino coincident with a tidal disruption event</i>”</p> |
| 25 TH AUG. 2020 | <p>INVITED TALK, NASA GSFC ASD Colloquium, Greenbelt, USA
“<i>A high-energy neutrino coincident with a tidal disruption event</i>”</p> |
| 5 TH JUNE 2020 | <p>INVITED TALK, DESY Astroparticle Seminar, Zeuthen, DE
“<i>A high-energy neutrino coincident with a tidal disruption event</i>”</p> |
| 26 TH OCT. 2019 | <p>INVITED TALK, PAHEN Conference, Berlin, DE
“<i>Neutrinos from optical transients with IceCube</i>”</p> |
| 30 TH JULY 2018 | <p>INVITED TALK, ESO Thirty Minute Talk, Santiago, CL
“<i>ZTF and the AMPEL Broker: Providing a realtime public astronomy survey</i>”</p> |

SCHOLARSHIPS, AWARDS AND HONOURS

- 2ND JULY 2020 | Winner of first session poster competition, Neutrino 2020 Conference
- 16TH OCT 2019 | Winner of the annual DESY Science Slam, DESY Hamburg
- 21ST NOV 2018 | Winner of the annual Zeuthen Science Slam, DESY Zeuthen

SELECTED TELESCOPE TIME AWARDED

- OCT. 2020 – | Australia Telescope Compact Array Program (Co-I)
MAR. 2021 | *Radio emission from stellar tidal disruption flares*
- SEP. 2020 – | Gran Telescopio Canarias Program (Co-I)
FEB. 2021 | *Spectroscopic classification of potential neutrino counterparts identified by ZTF*
- JUNE 2020 – | Very Large Array Program (PI)
PRESENT | *VLA observations to establish the neutrino counterpart to a giant AGN flare*

SUPERVISION, TEACHING AND OUTREACH

- OCT. 2019 – | Supervision of master's degree student: J. NECKER
OCT. 2020 | *Search for high-energy neutrinos from core-collapse supernovae*
- SEP. 2019 – | Supervision of master's degree student: R. NAAB
SEP. 2020 | *The next-generation Optical Follow-Up (OFU) program for IceCube*
- OCT 2018 – | Supervision of bachelor's degree student: A. VAGTS
AUG. 2019 | *Investigation of the TXS 0506+056 neutrino spectrum*
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- JUNE 2018 – | Teaching Assistant: *Experimental Astroparticle Physics* (2 semesters)
JULY 2019
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- OCT. 2018 – | Volunteer: *International Cosmic Day* (2 years)
NOV. 2019
- JUNE 2018 – | Volunteer: *Lange Nacht der Wissenschaft* (2 years)
JUNE 2019
- MARCH 2018 | Organiser: *IceCube Masterclass*

ADDITIONAL INFORMATION

- Collaboration Membership** IceCube, Zwicky Transient Facility (ZTF)
- Programming Skills:** Python, L^AT_EX, Bash (Advanced)
- Language Skills:** English (Native Speaker), German (Advanced - C1)

SELECTED PUBLICATIONS

- 2020** S. REUSCH ET AL., *Observations of bright nuclear transient AT2019fdr coincident with high-energy neutrino IceCube-200530A*, (in prep.)
Realtime follow-up and data analysis, statistical analysis, contributed radio data
- M. M. KASLIWAL et al., *Kilonova Luminosity Function Constraints based on Zwicky Transient Facility searches for 13 Neutron Star Mergers* (submitted)
Developed one of three analysis frameworks, realtime follow-up and data analysis
- R. STEIN et al., *A high-energy neutrino coincident with a tidal disruption event* (submitted)
Developed analysis framework, led follow-up program, modelling, statistical analysis
- V. PALIYA et al., *Multi-Frequency Observations of the Candidate Neutrino Emitting Blazar BZB J0955+3551* (submitted)
Statistical analysis of chance coincidence probability, led neutrino data analysis
- A. FRANCKOWIAK et al., *Patterns in the multi-wavelength behavior of candidate neutrino blazars* 2020, ApJ, 893, 162
Contributed to the discussion and interpretation of neutrino correlation
- 2019** R. STEIN FOR THE ICECUBE COLLABORATION, *Search for Neutrinos from Populations of Optical Transients*, PoS(ICRC2019)1016
Developed likelihood analysis code, TDE catalogue compilation, data analysis