Robert Stein

Personal Data

Place and Date of Birth: London | 10 June 1995

NATIONALITY: British & Irish
EMAIL: robert.stein@desy.de
WEBSITE: robertdstein.github.io

RESEARCH

1 July. 2017 - Present | PhD student in Multi-Messenger Astronomy, **DESY Zeuthen**

I am involved in the search of the sources of high-energy neutrinos.

Nov. 2015 – July 2016 | Master's Thesis in Astroparticle Physics, University of Hamburg

Research for my Master's Thesis, titled "Reconstruction of Charge Number of Heavy Cosmic Rays using Cherenkov Light", was conducted in the Astroparticle Physics group of the University of Hamburg as part of an academic

exchange.

Research Advisor: D. HORNS

EDUCATION

July. 2017 – Present | PhD in Experimental Physics, Humboldt University of Berlin

SEP. 2013 – JUNE 2017 | MSci in Physics with a Year In Europe,

Imperial College London

Graduated with First Class Honours

TEACHING AND STUDENT SUPERVISION

Oct. 2019 – Present Supervision of MSc student: J. Necker

Search for high-energy neutrinos from core-collapse supernovae

SEP. 2019 – Present Supervision of MSc student: R. Naab

The next-generation Optical Follow-Up (OFU) program for IceCube

 $\frac{\text{MAY} - \text{JULY}}{2019}$ Teaching Assistant: Experimental Astroparticle Physics

Humboldt University of Berlin

Oct 2018 – Aug. 2019 Supervision of BSc student: A. Vagts

Investigation of the TXS 0506+056 neutrino spectrum

 $\frac{\text{JUNE} - \text{JULY}}{2018}$ Teaching Assistant: Experimental Astroparticle Physics

RESEARCH INTERNSHIPS AND PHYSICS SCHOOLS

Supervisor: T. TEKAMPE

3 - 11 Oct. 2018 School for Astroparticle Physics, Obertrubach-Bärnfels, Germany

DAAD SUMMER STUDENT PROGRAM, **TU Dortmund**, **DE**I worked within the Mu2e experiment on the magnetic field of the solenoids.

SELECTED PUBLICATIONS

2020 ICECUBE COLLABORATION, Search for high-energy neutrinos from tidal disruption events, (in prep.)

R. Stein et al., A high-energy neutrino coincident with a tidal disruption event, (in prep.)

2019 R. Stein for the IceCube Collaboration, Search for Neutrinos from Populations of Optical Transients, PoS(ICRC2019)1016

Talks and Posters

The IceCube Remittee System

25 - 27 Oct. 2019 Invited Talk, Perspectives in Astroparticle physics from High Energy Neutrinos (PAHEN), Berlin, DE "Neutrinos from optical transients with IceCube"

24 July-1 Aug.
2019 Talk, 36th International Cosmic Ray Conference (ICRC), Madison, USA
"Search for Neutrinos from Populations of Optical Transients"

25 - 29 Mar. 2019 Talk, The New Era of Multi-Messenger Astrophysics, Groningen, NL "Search for High-Energy Neutrinos from Populations of Optical Transients"

27-31 Aug.
2018 Poster, TeV Particle Astrophysics (TeVPA), Berlin, DE
"Probing the Tidal Disruption of Stars by Supermassive Black Holes with the IceCube Neutrino Observatory"

20-26 Jan. Invited Talk, ESO Thirty Minute Talk, Santiago, CL

"ZTF and the AMPEL Broker: Providing a realtime public astronomical survey"

20-26 Jan. Talk, Using Tidal Disruption Events to Study Super-Massive Black Holes, Aspen, USA

"The search for high-energy neutrinos: a TDE stacking analysis"

SCHOLARSHIPS, AWARDS AND HONOURS

16TH OCT 2019 | Winner of the annual DESY-wide Science Slam, DESY Hamburg
 21ST Nov 2018 | Winner of the annual Zeuthen Science Slam, DESY Zeuthen
 OCT. 2013 - JUNE 2017 | President's Undergraduate Scholarship, Imperial College London
 JUNE 2015 - SEP. 2015 | DAAD RISE Scholarship, TU Dortmund

OUTREACH

Aug. - Nov. | International Cosmic Day 2019, DESY (Zeuthen)

March 2019 | IceCube Masterclass, DESY (Zeuthen)

Aug. - Nov. | International Cosmic Day 2018, DESY (Zeuthen)

March 2018 | IceCube Masterclass, DESY (Zeuthen)

Aug. - Nov. | International Cosmic Day 2017, DESY (Zeuthen)

Oct. 2017 | IceCube Masterclass, DESY (Zeuthen)

Computer Skills

Operating Systems: Linux/Unix, MacOSX, Windows

Programming: C/C++, Python, Bash, Shell (advanced);

Root Data Analysis, Matlab (intermediate)

Mathematical and Numerical Packages: Mathematica, HEALPix (basic)

Statistical Tools: Minuit, MCMC simulations (basic)

Database Packages: MongoDB (basic)

 $\textbf{Typesetting Packages:} \quad \text{\mathbb{L}^T_EX, MSOffice, OpenOffice}$

LANGUAGES

English: Native Speaker German: Advanced (C1)