

JUDITH HÖFER

Researcher in Particle Physics, PhD

Curriculum Vitae as of May 2024

WORK EXPERIENCE

- April 2024 - now **PostDoc in Particle Physics at IFIC València**
data analysis ♦ ATLAS analysis: search for long-lived particles
- August 2019 -
October 2023 **PhD in Particle Physics at DESY Hamburg**
data analysis ♦ ATLAS analysis: search for exotic Higgs decays
main analyzer of the first LHC search for exotic decays of the Higgs boson to two new
scalars of different mass, $H \rightarrow a_1 a_2$, carried out in the full- b final state
♦ development of calibration method for novel b-hadron reconstruction technique
roles ♦ contact position for ATLAS flavour tagging software validation (PhysVal)

EDUCATION

- August 2019 - October 2023
PhD Particle Physics THESIS Search for Exotic Higgs Decays to Two Light Scalars in the 6b
Final State and Calibration of Soft Secondary Vertices with the
ATLAS Experiment
SUPERVISED BY Dr. Claudia Seitz and Prof. Beate Heinemann
AT DESY Hamburg and Albert-Ludwigs-Universität Freiburg, Germany
- October 2016 - February 2019
Master of Science Physics THESIS Local Domains and Graph Diameter of Biquadric Fields in a
Finite Geometry
SUPERVISED BY Prof. Klaus Mecke
AT Friedrich-Alexander Universität Erlangen-Nürnberg, Germany
- February 2017 - August 2017
semester abroad PROJECT Calculation of the Tidal Love Number k_2 for a Neutron Star
in the Polytopic Model
SUPERVISED BY Prof. Chang-Hwan Lee
AT Pusan National University, South Korea
- October 2013 - September 2016
Bachelor of Science Physics THESIS Analysis of an excess flux of gamma rays at 30 degrees in
longitude in the plane of the Milky Way galaxy
SUPERVISED BY Prof. Stefan Funk
AT Friedrich-Alexander Universität Erlangen-Nürnberg, Germany

SELECTED COURSES AND PROGRAMS

- September 2021 Mentee in the dynaMENT doctorate program: mentoring for women in natural sciences
- September 2022 DESY AND UNIVERSITY OF HAMBURG
- 2020 Co-founder of the DOIT working group diversity
- 2022 · initiate creation of help website at DESY: lists points of contact for people in
difficult situations · organize social events ·
DESY DOCTORAL INITIATIVE DOIT
- June 2018 Mentee in the ARIADNE TechNat Mentoring programme to support high-potential
- February 2019 female Master's students
FRIEDRICH-ALEXANDER UNIVERSITÄT ERLANGEN-NÜRNBERG

SKILLS

Languages German (native), English

Software C++, Python, ROOT

Tools Git, Bash, HTCondor, LHC Computing Grid, Rucio, jupyter, TRExFitter (RooFits/RooStats based), L^AT_EX, Office, Inkscape

Personal Interests ♣ painting & graphic design (judiths.website) ♣ cooking ♣ playing poi ♣