

Jonas Glombitza



Contact

Otto-Blumenthal-Str. 16
52075 Aachen
Phone: +49 241 80 27326
jonas.glombitza@rwth-aachen.de
www.jonas-glombitza.com

Interests

Deep learning, statistics, generative models, particle physics

Skills

Computing:

Python, C++, LaTeX, Git

Libraries:

Keras, TensorFlow, NumPY,
Matplotlib, ROOT

Languages:

German, English (fluent), French (elementary)

Interpersonal:

Management, mentoring, flexibility, organization, knowledge sharing

Summary

PhD student at RWTH Aachen University researching ultra-high energy cosmic rays and the application of deep learning in particle physics. Experienced in numerous programming languages including Python and C++. Well experienced in Keras, TensorFlow, NumPy, and Matplotlib. Strong background in machine learning, statistics, teaching, and self-organization. Leader of the machine learning group in the Pierre Auger Collaboration.

Experience

PhD student - 11/2017 to summer 2021 (expected)

- Developed and deployed a novel (deep-learning-based) algorithm to determine the mass composition of ultra-high energy cosmic rays.
- Researched generative models to accelerate simulations.
- Researched adversarial frameworks for domain adaption.
- Lecturer for the course: 'Deep Learning for Physics Research at RWTH Aachen University' (2018, 2019, 2020, and 2021).
- Hold various tutorials and lectures in conferences and workshops to educate students in machine learning.
- Co-supervisor of various bachelor and master students.

Master student - 10/2015 to 10/2017

- Development of a neural network architecture to reconstruct air-shower properties at cosmic-ray observatories.

Internship at DESY- summer 2016

- Simulation study of detector backgrounds for future linear colliders.

Bachelor student - 10/2012 to 10/2015

- Performed a simulation study of the reconstruction of heavy ions at the AMS02 experiment.
- Student assistant for three lab courses.

Education

Master of Science: **Physics** - 2017, Grade 1,2 with honors,
RWTH Aachen University, Germany

Bachelor of Science: **Physics** - 2015, Grade; 1,8
RWTH Aachen University, Germany

Publications

Coauthor of the book 'Deep Learning for Physics Research'. Author of various publications. See [full list](#).