

Moritz Schäfer

curriculum vitæ

Personal data

Date of birth 06th of January 1992
Place of birth Tübingen, Germany
Nationality german

Studies

PhD applicant in Biology/Bioinformatics

2018/9 - today at ETH Zurich
PhD program Systems Biology
Supervisor Prof. Dr. Constance Ciaudo

MSc Computer Science

2015/9 - 2018/5 at Technical University Berlin
Grade 1.1
2018/5/10 Master's thesis
Title *PAVOOC - An AI integrated web-app for CRISPR target recommendation*
Grade 1.0
Supervisor Prof. Dr. Manfred Opper
Assistant Supervisor Dr. Andreas Steffen

BSc Computer Science

2012/9 - 2016/8 at Technical University Berlin
Grade 1.9
2013/9 - 2014/2 at University of La Laguna, Spain
2015/9 - 2016/5 at Jiao Tong University Shanghai
2016/5/17 Bachelor's thesis at Jiao Tong University
Title *Intercultural comparison of emotion recognition with EEG — A first attempt*
Grade 1.3
Supervisor Prof. Dr. Bao Liang Lu (Shanghai)
Prof. Dr. Benjamin Blankertz (Berlin)

Education

2008/9 - 2011/6 at Gewerbliche Schule Tübingen, Germany
2011/6/7 German Abitur with honors
Grade 1.2

Publications

- [1] Moritz Schaefer and Constance Ciaudo. Prediction of the miRNA Interactome - Established Methods and Upcoming Perspectives. *Computational and Structural Biotechnology Journal*, 18:548–557, 2020.
- [2] Moritz Schaefer, Djork-Arne Clevert, Bertram Weiss, and Andreas Steffen. PAVOOC: Designing CRISPR sgRNAs using 3D Protein Structures and Functional Domain Annotations. *Bioinformatics*, 2018.
- [3] Si-Yuan Wu, Moritz Schaefer, Wei-Long Zheng, Bao-Liang Lu, and Hiroshi Yokoi. Neural patterns between Chinese and Germans for EEG-based emotion recognition. In *2017 8th International IEEE/EMBS Conference on Neural Engineering (NER)*, 5 2017.

Research projects

- 2016/10 - 2017/2 Generation of arbitrary-sized fragments for *ab initio* protein structure prediction in Rosetta
- 2014/10 - 2015/5 Development of a reliable multi-channel RSS measurement tool for Wireless Sensor Networks
- 2010/9 - 2011/4 GPGPU-accelerated ray tracing with OpenCL at “Jugend forscht”
- 2009/9 - 2010/4 Development of an ultrasonic range analyzer for 3D localization at “Jugend forscht”

Scholarships

- 2016/10 - 2018/6 Deutschlandstipendium supported by General Electrics Germany
- 2015/10 - 2016/10 Deutschlandstipendium supported by Carmeq GmbH

Further Qualifications

Computer skills

Bioinformatics	OMICs, Data Integration, Python/Pandas, Snakemake
Machine/Deep Learning	pytorch, scikit-learn
Operating Systems	Linux/Emacs, (Windows, macOS)
Web	React, Flask
Software	LaTeX, Inkscape/Adobe Illustrator, MS Office

Wetlab skills

(s)RNA	extraction, handling, RT-qPCR, NGS
DNA	extraction, design, cloning, PCR/screening

Teaching

Student teaching	Wet Lab teaching for lab rotation students
Course teaching	Teaching Jupyter Notebooks, sRNA-seq analysis and data integration via Zoom

Language skills

German	native language
English	fluent
Spanish	fluent
Chinese	notions, HSK3

Social commitment

AMB (academic staff representation at ETH)

2020/3 - today	Treasurer
2019/10 - 2020/9	Representative at ETH-Biology Departments Conference
2019/2 - 2020/3	Event Manager

OILS (Open Innovation in Life Sciences)

2020/10 - today	Organization and Moderation of panel discussions
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- Scientists and Society - let's talk! - A panel discussion about science communication
- Open up for Open Science – a panel discussion about the state of Open Science in Zürich

Others

2019/10 - today	Organization of Systems Biology PhD program retreat
2014 - today	Contribution to various open source software projects
2011/8 - 2012/9	Volunteering at school/nursery in Bolivia

Zürich March 19, 2021