Klosterneuburg, Austria
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Dominik Schrempf

Professional experience

May 2025 – present	**Haskell software consultant** *Well-Typed LLP*, London, UK
Project	Development of `hs-bindgen`, a tool for automatic generation of Haskell bindings from C header files *Haskell, Compiler development, C foreign function interface*
Jun 2023 – April 2025	**Software consultant** *TNG Technology Consulting*, Munich, Germany
Project	Analysis and classification of neurobiological time-series data using a large variety of methods including state of the machine learning methods and deep neural networks *Python, NumPy/SciPy stack, scikit-learn, Aeon, Tensorflow*
Project	Full stack development of a business process orchestrator *TypeScript, AWS with infrastructure as code, PostgreSQL, React*
Jan 2018 – May 2023	**Postdoc in computational biology** *Eötvös Loránd University*, Budapest, Hungary
Research	Probabilistic models for estimating ages of ancestral species *Bayesian inference with Markov chain Monte Carlo algorithms; Maximum likelihood inference with expectation maximization and gradient ascent; Computational simulations with Haskell*
Mar 2017 – Aug 2017	Research fellow *University of St. Andrews*, United Kingdom

Education and training

Mar 2016 – May 2016	Visiting fellow *Aarhus University*, Denmark Advisor: Asger Hobolth
Sep 2013 – Aug 2017	**Doctor of Philosophy in computational biology** *University of Veterinary Medicine Vienna*, Austria Research: Inference of evolutionary trees using DNA sequences
Oct 2010 – Apr 2013	**Master of Science in technical physics** *Vienna University of Technology*, Austria Research: Statistics of ion-induced electron emission
Feb 2010 – Sep 2010	Visiting student *Pontificia Universidad Católica de Chile*, Santiago de Chile
Oct 2006 – Feb 2010	**Bachelor of Science in technical physics** *Vienna University of Technology*, Austria Research: Interacting hydrogen atoms and their application as qubits

1997 – Jul 2005 **High school degree**
Scientific High School, Brucknerstraße Wels, Austria

Awards

2018 Promotio sub auspiciis praesidentis rei publicae: Highest honor for academic success of Austria; Austrian Award of Excellence ($\sim 10\,000$€)

2016 Residence grant, Aarhus University, Denmark (~ 3000€)

2010 Joint Study Award for an exchange semester in Santiago de Chile

2007 – 2009, 2012 Academic scholarship, Vienna University of Technology (~ 900€ yearly)

Languages

German	Primary fluency	*Mother tongue*
English	Primary fluency	*Working language for more than 10 years*
Spanish	Professional working proficiency	
Hungarian	Limited working proficiency	*Partly spoken in my family*

Computational skills

Programming languages	■■■■■	Haskell	*Development of libraries and applications*
	■■■■□	Nix	*Software packaging, system deployment*
	■■■■□	TypeScript	*Full stack application development*
	■■■■□	Python	*Data science, machine learning and plotting*
	■■■□□	C, C++	
	■□□□□	Rust	
	■□□□□	Fortran	
Databases	■■■□□	PostgreSQL	
	■■■□□	GraphQL	
Mathematics and statistics	■■□□□	R	
	■■□□□	Mathematica	
	■□□□□	Matlab	
Tools	■■■■■	Emacs	*Everyday use*
	■■■■□	Bash, Linux core utilities	
	■■■■□	LaTeX	*Scientific publications and presentations*
	■■■■□	(Ma)git	
	■■■□□	LibreOffice	
Cloud services	■■■□□	Amazon Web Services	
	■■■□□	GitHub Actions	
Operating system	■■■■■	Linux	*NixOS; previously Arch Linux and Debian*

Maintained packages on the Haskell package archive

`mcmc`	*Markov chain Monte Carlo sampler with advanced algorithms*
ELynx Suite	*Library and tool set for computational biology*
`circular`	*Circular fixed-size mutable stacks*
`covariance`	*Estimation of large-dimensional covariance matrices*
`dirichlet`	*Multivariate Dirichlet distribution*
`pava`	*Computation of greatest convex majorants and least concave minorants*

Teaching experience

Supervised students	Lénárd Szánthó (2020 – 2022), Lukas Weilguny (2016)
2014 – 2015	University of Veterinary Medicine Vienna (Austria) Supervised courses: Bioinformatics in Biomedicine, Next Generation Sequencing
2008 – 2012	Vienna University of Technology (Austria) Supervised courses: Basic Principles of Physics 1–3, Modelling in Physics, Quantum Mechanics 2 and Laboratory Work
2010 – 2011	Tutor, Lernquadrat (Tutored pupils aged 11 – 18 in Mathematics and Physics), Vienna (Austria)

Official functions

2014 – 2017	Member of the Representatives of the PhD students of the University of Veterinary Medicine Vienna
2014 – 2017	Member of the Curricular Commission of the PhD program of the University of Veterinary Medicine Vienna
2014 – 2015	Student speaker of the Vienna Graduate School of Population Genetics

Scientific publications

I have worked on 24 scientific papers, 20 of which have already been published in renowned scientific journals (Google Scholar profile).

Extracurricular activities

Oct 2005 – Sep 2006	Paramedic (civil service), *Red Cross*, Grieskirchen, Austria

In my free time I enjoy spending time with my family, singing in a choir and making music with the saxophone and the piano. I am fond of juggling and winter sports as well as hiking in the mountains with friends. I try to maximize bike usage and reduce my carbon footprint. I like to travel by train and to get to know new cultures and ways of life.