



02.07.1984 in Görlitz, Germany



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23.08.2021 (son Jakob)



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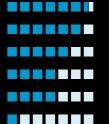
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https://github.com/KathSe1984

Programming

Python
R
Unix/Bash
HTML
SQL
C++



Bioinformatics

Genomics
Sequence Annotation
Orthologue Search
Phylogenetics
Transcriptomics

Transcriptomics
Statistics
Protein Structure
Prediction



Kathrin Martina Seibt

About me

I am a computational and molecular biologist with an interdisciplinary background. In order to address my research questions and to handle large amounts of data, I trained myself to acquire and apply programming skills in Python and R. I am passionate about problem solving, programming, and data visualization. Therefore, I am keen to expand my skill set and approach challenging tasks by integrating state-of-the-art technologies.

Work Experience

Career break for Maternity Leave

07/2021 - present

· contributions to data analyses, project reports, and publications

NORIKA GmbH, German potato breeder

01/2021 - 06/2021

• computational work: sequence analyses & quality control, database analysis, optimization & conversion from dBase, bioinformatics workshop

Technische Universität Dresden, Germany Plant Cell & Molecular Biology

04/2012 - 10/2020

(late Prof. Dr. Thomas Schmidt/Dr. Tony Heitkam)

- BMBF projects "AVIMA" and "MASEPA" development of resistance-linked molecular markers for marker-assisted potato breeding
- repetitive element genomics in nightshades & higher plants
- bioinformatics: comparative genomics, sequence analyses, creating analysis workflows in Python, statistical analyses & data visualization in R
- molecular biology: molecular markers, molecular cloning, DNA sequencing

NORIKA GmbH, German potato breeder

02/2009 - 03/2012

- BMBF project "RetroKartoffel" development of molecular markers for potato cultivar differentiation
- molecular biology: plant DNA isolation, molecular markers
- bioinformatics: sequence analyses, establishment of a fingerprint database, genotype clustering

Medizinisches Labor Ostsachsen (Internship)

08/2006, 08/2007

• molecular/microbiology: cultivation, routine microbiological and molecular biological diagnostics such as ELISA, PCR, agglutination tests

Diecular ±

Topic

Methods

Education

Technische Universität Bergakademie Freiberg, 10/2003 – 10/2008 Germany

Diploma Natural Scientist (Diplom-Naturwissenschaftler) (grade 1.4; specialization biotechnology, environmental microbiology)

- course of studies: Angewandte Naturwissenschaft (applied science)
- diploma thesis at the chair of Environmental Microbiology (grade 1.2):
 "Cultivation & molecular characterization of sulfate-reducing bacteria [...]"
- molecular biology, microbiology, analytical chemistry, mathematics, physics
- basics of computer science and business administration

Gymnasium 2 Annenschule, Görlitz, Germany

2003

General

Abitur (grade 1.6; specialization mathematics, biology)

Languages

German **English** Italian Spanish

Personality

Extrovert Introvert Rational **Emotional** Analytical Creative Organized Chaotic

Soft Skills

problem solving critical thinking growth mindset willingness to learn quick grasp decision-making reliability self-management scheduling effective communication team work open-mindedness adaptability intrinsic motivation dedication

Hobbies







Travelling **Pilates** Photography





Board Games E-Learning

References

Dr. Tony Heitkam TU Dresden Plant Cell & Molecular Biology **4** +49(0)351 463-39593 Tony.Heitkam@tu-dresden.de

Dr. Katja Muders **NORIKA GmbH +**49(0)38209 47-634 muders@norika.de

Kathrin Martina Seibt

Detailed Information: https://github.com/KathSe1984/ProfessionalProfile/

Professional Development (Selection)

Coursera MOOCs on Bioinformatics and Programming

since 2013

• Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization DeepLearning.AI; 5 weeks

• Bioinformatics algorithms [part 1] University of California; 14 weeks

 Bioinformatics: introduction and methods Peking University: 15 weeks

• Introduction to interactive programming in Python Rice University; 8 weeks

• Principles of computing [part 1 and 2] Rice University; 10 weeks

• Learn to program: The fundamentals University of Toronto; 10 weeks

· Command line tools for genomic data science

John Hopkins University; 4 weeks

• Computational molecular evolution Technical University of Denmark; 6 weeks

• Data analysis and statistical inference Duke University: 8 weeks

Pattern discovery in data mining

University of Illinois at Urbana-Champaign; 4 weeks

Graduate Academy courses & lectures at **TU Dresden**

2015 - 2017

Programming for bioinformatics

· Applied bioinformatics

Fundamentals in R

Research data managements

 Probability, statistics & programming for computational biology

Introduction to mathematical biology

Reading strategies and techniques

Good Manufacturing Practice (GMP)

2015, 2018

• GMP

• GMP Statistics

Technische Universität Dresden; 1 week Universität Leipzig; 3 days

Software

• Seibt KM, Schmidt T & Heitkam T (2018) FlexiDot: Highly customizable, ambiguity-aware dotplots for visual sequence analyses. Bioinformatics 34(20):3575-3577; GitHub: https://github.com/molbio-dresden/flexidot

Selected Publications

- Seibt KM, Schmidt T & Heitkam T (2020) The conserved 3' Angiodomain defines a superfamily of short interspersed nuclear elements (SINEs) in higher plants. Plant Journal 101(3):681-699
- Seibt KM, Wenke T, Muders K, Truberg B & Schmidt T (2016) Short interspersed nuclear elements (SINEs) are abundant in Solanaceae and have a family-specific impact on gene structure and genome organization. Plant Journal 86(3):268-285
- Wenke T, Seibt KM, Döbel T, Muders K & Schmidt T (2015) Inter-SINE amplified polymorphism (ISAP) for rapid and robust plant genotyping. In: Batley J (ed) Methods in Molecular Biology - Plant Genotyping: Methods and Protocols. Springer, New York, pp 183-192
- Seibt KM, Wenke T, Wollrab C, Junghans H, Muders K, Dehmer KJ, Diekmann K & Schmidt T (2012) Development and application of SINEbased markers for genotyping of potato varieties. Theoretical and **Applied Genetics** 125(1):185-196

Full publication list: https://scholar.google.com/citations?user=5tWrgxgAAAAJ