## **Dr. Kristian Rother**

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# **Areas of Expertise**

#### **Software Development**

- Published Book: "Managing Your Biological Data with Python".
- Doctoral degree in structural bioinformatics (managing large data bodies, 3D algorithms).
- Familiar with Django, Flask, Numpy, PIL, Scipy, scikit-learn, gevent, automated test frameworks.
- Sample project: <u>iimcb.genesilico.pl/moderna</u>
- Basic skills in C++, Java, C, R, HTML, CSS, JavaScript, PostGreSQL, Fortran, Pascal, and Assembler (C64).

## **Software** Engineering

- Professional Scrum Master I certificate. www.scrum.org.
- Automated testing and TDD.
- Testing of web pages with Selenium WebDriver and Selenium IDE
- Version control with: Mercurial, Git, Bazaar, SVN
- Agile Best Practices: Scrum, Kanban, User Stories, Pair Programming etc.
- Published article: "A toolbox for developing bioinformatics software".

## **Training and Communication**

- Vast repertoire of training methods, see <u>www.academis.eu/blog/tags/teaching/</u>.
- Toastmasters Advanced Communicator Bronze & Advanced Leader Silver Certificate
  - www.toastmasters.org.
- President / Vice President of the Spreeredner speaking club in Berlin (2013-2016)

www.spreeredner.de.

#### **Career and Education**

2011-2016 Professional trainer

workshops for software developers and scientists

www.academis.eu

2015-2016 Freelance translator

workshops for software developers and scientists

<u>"Einführung in Data Science"</u> (Joel Grus) <u>"Datenanalyse mit Python"</u> (Wes McKinney)

www.oreilly.de

2010-2016 Freelance trainer for software developers

Noble Prog

www.nobleprog.co.uk

2014-2016 Lecturer Python / C++ programming

Zedat / Freie Universität Berlin

www.zedat.fu-berlin.de/Schulung/Home

2013-2016 Lecturer in biochemistry and research methodology

Medical School Berlin & Medical School Hamburg

www.medicalschool-berlin.de

2014-2015 Academic Director

Overseas Medical Education <a href="https://www.premedicine-berlin.de">www.premedicine-berlin.de</a>

2006-2011 Scientific software developer

development of 3D modeling software project lead & coaching junior scientists

with Prof. Janusz M. Bujnicki, Warsaw, Poland

www.genesilico.pl

2002-2006 Postgraduate studies

doctoral thesis at the Department of Biology, HU Berlin, thesis

**Efficient use of a Protein Structure Annotation Database** 

(final grade: magna cum laude).

**1996-2002 Diploma of Biochemistry** at the FU Berlin

(final grade: very good).

**Abitur** at the Gymnasium Steglitz Berlin

(subjects: Chemistry, Latin, Mathematics, average 1.3).

## Languages

German native Finnish native

**English** expert; TOEFL certificate with 113/120 points

Polish fluent

**Latin** literacy (nine years)

#### **Selected Publications**

#### **Books**

**Managing your Biological Data with Python.** Via A, Rother K, Tramontano A. CRC Press 2014.

#### Research articles

**Best practices in bioinformatics training for life scientists.** Blicher, Bongcam-Rudloff, Brazas et al. Brief Bioinform. 2013 Sep;14(5):528-37.

A toolbox for developing bioinformatics software. Rother, Potrzebowski, Puton et al. Briefings in Bioinformatics 2011.

The complex of tmRNA-SmpB and EF-G on translocating ribosomes. Ramrath, Yamamoto, Rother, et al. Nature. 2012 May 6;485(7399):526-9.

Bioinformatics Training Network (BTN): a community resource for bioinformatics trainers. Schneider, Walter, Blatter et al. Briefings in Bioinformatics 2011 Nov 22.

**RNA tertiary structure prediction with ModeRNA.** Rother, Rother, Puton et al. Brief Bioinform. 2011 Nov;12(6):601-13.

**Multi-Stage Learning Aids applied to hands-on software training.** Rother, Rother, Pleus & Upmeier zu Belzen. Briefings in Bioinformatics 2010.

All publications on PubMed