Curriculum Vitae of Georg Basler, PhD

Bioinformatics consultant
Software engineer
Data scientist

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I hold a MSc in Computer Science and PhD in Bioinformatics and was post-doctoral scientist at the Max Planck Society (Germany), Consejo Superior de Investigaciones Científicas (Spain), Northeastern University, University of California, Berkeley, and the Lawrence Berkeley National Laboratory (USA). My fields of research include bioinformatics approaches in bacteria, plants, and human disease. I published 1 book chapter and 17 peer-reviewed journal articles and taught two Master's courses. I acquired more than 280.000 euros of independent research funding and gave several presentations at international conferences. Since 2019, I am self-employed consultant and have worked for 15+ international biomedical and pharmaceutical organizations. My current focus areas include software engineering (full stack), bioinformatics tools, cloud computing, cluster analysis, network analysis, databases and data visualization in biomedical areas.

Software engineering

- Full stack developer
- DevOps
- Cloud computing (AWS)
- Databases
- Linear programming
- Continuous integration & development
- High-performance computing
- Windows/Linux
- Languages: R, Shiny, Java, Matlab, Python, Jupyter Notebook, C, SQL

Bioinformatics analysis

- Cluster analysis
- Networks
- Metabolism
- omics data
- Gene expression analysis
- Gene enrichment
- Machine learning
- Tools & algorithms
- Statistical data analysis
- Data integration & visualization

Work history

Since 2019 Self-employed bioinformatics consultant (remote)
2017 – 2019 Research Associate & Lecturer at *Max Planck Institute* (Germany)
2015 – 2017 Postdoctoral Fellow at *University of California, Berkeley* (USA)
2013 – 2015 Marie Curie Fellow at *Consejo Superior de Investigaciones Científicas* (Spain)
2008 – 2012 PhD in Bioinformatics at *Max Planck Institute* and *University of Potsdam* (Germany)
2004 – 2007 Student software programmer at *Mercedes-Benz Research & Technology* (Germany)
2000 – 2007 BSc & MSc in Computer Science at *Humboldt University* (Germany)

Wet-lab experience

- Genome editing and advanced molecular cloning, bacterial membrane engineering
- Flow cytometry, Fluorescence microscopy, DNA and protein extraction and quantification

Teaching

- Master's course "Constraint-based Modeling of Cellular Networks" (2018), University of Potsdam, Germany
- Master's course "Profile Data and Network Analysis" (2017), University of Potsdam, Germany
- Tutorial "Introduction to theoretical systems biology" (2009), University of Potsdam, Germany

Peer-Reviews (total: 22)

Scientific Reports, *Plant Physiology*, *Bioinformatics*, *MDPI Metabolites*, *MDPI Algorithms*, *MDPI Molecules*, *Microbial Cell Factories*, *Journal of Molecular Engineering & Systems Biology*, *Frontiers in Genetics*

Reviewer board and guest editor for *MDPI Metabolites*.

Book chapter

Georg Basler (2015). Computational prediction of essential metabolic genes using constraint-based approaches. L. J. Lu (Ed.), *Gene Essentiality: Methods in Molecular Biology Vol. 1279* (pp. 183–204). New York; Springer.

Peer-reviewed publications *(*corresponding author)*

1. Eloundou-Mbebi, Küken, **Basler**, Nikoloski* (2019) *PLoS Comput Biol* 15(1): e1006687.
2. **Basler**, Fernie, Nikoloski* (2018). *Bioscience Reports* 38(6).
3. **Basler***, Thompson, Tullman-Ercek, Keasling (2018) *Biotechnology for Biofuels* 11:136.
4. Eloundou-Mbebi, Omranian, Kleessen, Neigenfind, **Basler**, Nikoloski* (2016) *Nature Communications* 7, 13255.
5. **Basler**, Nikoloski, Larhlimi, Barabási, Liu* (2016) *Genome Research* 26(7):956-968 (cover article).
6. **Basler**, Küken, Fernie, Nikoloski* (2016) *Frontiers in Bioengineering and Biotechnology* 4:31.
7. Omranian, Kleessen, Tohge, Klie, **Basler**, Mueller-Roeber, Fernie, Nikoloski* (2015) *Trends in Plant Science* 20(5):266-268.
8. **Basler** and Simeonidis* (2015) *Frontiers in Genetics* 6:20.
9. Güell*, Sagués, **Basler**, Nikoloski, Serrano* (2012) *Journal of Computational Interdisciplinary Sciences* 3(1-2):45-53.
10. Larhlimi*, **Basler**, Grimbs, Selbig, Nikoloski* (2012) *Bioinformatics* 28(18): i502-i508.
11. **Basler***, Grimbs, Nikoloski (2012) *Biosystems* 109(2):186-191.
12. **Basler***, Grimbs, Ebenhöh, Selbig, Nikoloski (2012) *Journal of the Royal Society Interface* 9(71):1168-1176.
13. **Basler*** and Nikoloski (2011) *Bioinformatics* 27(19):2761-2762.
14. **Basler***, Ebenhöh, Selbig, Nikoloski* (2011) *Bioinformatics* 27(10):1397-1403.
15. **Basler***, Grimbs, Selbig, Nikoloski (2010). In *Proceedings of the 7th International Workshop on Computational Systems Biology* (WCSB 2010). Tampere, Finland. Tampere International Center for Signal Processing.
16. **Basler**, Nikoloski, Ebenhöh, Handorf* (2008) *Genome Informatics* 20:135-148.
17. Köhl*, **Basler**, Lüdemann, Selbig, Walther (2008) *Plant Methods* 2008, 4:11.

Languages

German (native), English (proficient), Spanish (proficient), French (intermediate), Portuguese (beginner)

Hobbies

Travelling, learning new languages, sailing, guitar, surfing, motorcycle, swimming