

# CURRICULUM VITAE

## CARL MAXIMILIAN MILLER

### ADDRESS

48 Cedar Ave Apt 2, Highland  
Park, 08904, NJ, USA

### E-MAIL

mmiller@bromberglab.org

### MOBILE

+49 176 57894940  
+1 (201) 920-4439

## PROFILE

Date of birth

October 2nd, 1984  
Muenchberg  
Germany

Nationality

German

Marital status

single

## LANGUAGES

German

*Mother tongue*

English

*Business fluent*

Spanish

*Fluent*

## PROGRAMMING SKILLS

Java

Python

R

C++

Databases / MySQL

HTML

PHP

JavaScript

Virtualization

(Docker, Singularity)

Cluster computing

(SGE, SLURM, AWS)

Web Development

(Front- and Back-end)



## WORK EXPERIENCE

### Post-Doctoral Associate (since 01/2018)

Molecular patterns of disease; Variant effect prediction  
Technical University Munich / Rutgers University

### Research Assistant, PhD (since 10/2015)

Protein function in the context of genetic diseases  
Technical University Munich / Rutgers University

### Research Assistant (10/2013 - 10/2015)

Evolutionary trace of protein structure  
LFE Bioinformatik, LMU, Munich, Germany; Prof. Ralf Zimmer

### IT-Consulting ROKundCO GmbH (2009 - 2012)

Munich, Germany

### Student Research Assistant (10/2006 - 04/2007)

LFE Bioinformatics, Munich, Germany

### Student Trainee IT (09/2006 - 04/2007)

Fred Butler (Linde Gas), Munich, Germany

### Internship IT (06/2006 - 09/2006)

Fred Butler (Linde Gas), Munich, Germany



## PUBLICATIONS

1. Zhu, C., **Miller, M.**, Marpaka, S., Vaysberg, P., Rühlemann, MC., Heinsen, F-A., Tempel, M., Lieb, W., Franke, A., Bromberg, Y. (2017) Functional sequencing read annotation for high precision microbiome analysis. *Nucleic Acids Res.* gkx1209, doi:10.1093/nar/gkx1209

2. Zhu, C., Mahlich, Y., **Miller, M.**, Bromberg, Y. (2017) fusionDB: assessing microbial diversity and environmental preferences via functional similarity networks. *Nucleic Acids Res.* gkx1060, doi:10.1093/nar/gkx1060

3. **Miller, M.**, Zhu, C. & Bromberg, Y. (2017). clubber: removing the bioinformatics bottleneck in big data analyses. *Journal of Integrative Bioinformatics*, 14(2), pp. -. Retrieved 9 Nov. 2017, from doi:10.1515/jib-2017-0020

4. **Miller, M.**, Bromberg, Y., & Swint-Kruse, L. (2017). Computational predictors fail to identify amino acid substitution effects at rheostat positions. *Scientific Reports*, 7, 41329.



## STUDIES

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**Master-Studies Bioinformatics** Grade 1.4 (4/2009 - 3/2012)  
Ludwig-Maximilians-University Munich (LMU), Munich, Germany  
Technical University Munich (TUM), Munich, Germany

Masterthesis: (Grade 1.0)  
*"Context-based prediction of protein binding strength"*

**Bachelor-Studies Bioinformatics** Grade 2.2 (10/2005 - 3/2009)  
Ludwig-Maximilians-University Munich (LMU), Munich, Germany  
Technical University Munich (TUM), Munich, Germany

Bachelorthesis: (Grade 1.7)  
*"miRNA-TARGET-NETWORKS"*

**A Levels** Grade 2.3 (07/2004)  
Justus-von-Liebigg Gymnasium, Neusaess, Germany



## CONFERENCES

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**ISMB 2017** (Prague)  
Intelligent Systems for Molecular Biology, Oral presentation

**IB 2017** (Denmark)  
International Symposium on Integrative Bioinformatics Oral presentation



## EXPERIENCES ABROAD

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**Round-the-world trip** (05/2012 - 09/2013)  
including South America, the Caribbean, USA, Pacific Islands, Australia, New Zealand, Central-/South-east-Asia, Nepal, India, China, South Africa

**Development aid in Bolivia** (10/2004 bis 01/2005)  
South America, Institution: Hostelling International



## EXTRACURRICULAR ACTIVITIES

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**Member and Board of L'Ensemble Medical at LMU Munich** (2010 - 2012)  
Management and organization, worldwide tours including Israel, Italy, USA

**Sideline jobs at various areas within ROKundCO** (2008 - 2012)  
ROKundCO GmbH Munich, Germany

**Co-Founder, manager and guitarist of the band Plan B** (2005 - 2009)  
Management, (show) concepts, and musical arrangements  
([www.band-plan-b.com](http://www.band-plan-b.com))

**Member of the boys choir: Augsburgers Domsingknaben** (1993 - 2005)  
National and international tours, CD productions and opera participations

**Service Wirtshaus in der Au, Munich, Germany** (2008 - 2012)

**Service Oktoberfest, Munich, Germany** (2010, 2011, 2014, 2015)  
Muenchner Knoedelei, Velodrom,

