

# Sina Rüeger

## Data Analyst

### Education

- **PhD in Life Sciences** in 2018  
Supervision by Prof. Zoltán Kutalik, Statistical Genetics Group at the Lausanne University Hospital.  
Thesis: *Integrative statistical analysis of -omics and genome-wide association studies data.*
  - Improvement of summary statistics imputation for application in more realistic scenarios and helping in building an easy to use software.
  - Identification of genetic risk factors in different disease areas using GWAS methodology.
  - Validation of gene expression-trait associations by applying text processing to a drugbank database, extracting drug target information and matching the results with gene expression-trait associations.
- **Master of Science in Engineering** in 2011  
Zurich University of Applied Sciences, Winterthur, average mark: 86%.  
Development of a statistical model to predict stages of Parkinson's disease from brain perfusion data, leading to a better understanding of disease progression.  
New Zealand Brain Institute, Christchurch, NZ.
- **Engineering degree in Data Analysis & Process Design** in 2008  
Zurich University of Applied Sciences, Winterthur, average mark: 82%.

### Experience

- **Fellay Lab**, EPFL  
*Postdoc: since Sept 2018*  
Analysis of human genomic data in the context of infectious diseases.
- **Division of Biostatistics**, University of Zurich  
*Biostatistician: Feb 2012 - Mar 2013*
  - Provided statistical consulting for medical staff and students.
  - Analysed medical data for over eight research groups.
- **Institute of Data Analysis & Process Design**, ZHAW  
*Research Assistant: Mar 2009 - Jan 2012*
  - Provided statistical data analysis for various in-house projects.
  - Built an application to automate cluster analysis on consumer testing data.
  - Predicted vehicle type using sensor data and random forests.

### Publications

[See full list here](#)

- Sina Rüeger et al. (2015) *Impact of common risk factors of fibrosis progression in chronic hepatitis C*. Gut.
- Sina Rüeger et al. (2017) *Improved imputation of summary statistics for realistic settings*. BioRxiv.
- Sina Rüeger et al. (2018) *Evaluation and application of summary statistic imputation to discover new height-associated loci*. PLOS Genetics.

### Contact

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### Skills

Statistical data analysis

Visualising data

R programming

*Used daily  
since 10 years*

Git

Knitr/RMarkdown

Genomics tools

High performance computing

Presentation & Communication

Adobe Illustrator

German native speaker

English fluent

French good command

### Awards & Activities

Awards for best student presentation at conferences (ESHG, EMGM, ePerMed).

Founding member and co-organiser of R-Ladies Lausanne.