

# Sina Rüeger

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January 13, 2018

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## Areas of biostatistical and data analytical experience

Statistical modelling	Regression modelling techniques (linear mixed effects, nonlinear, generalised additive, robust and survival models), analysis of variance, model & variable selection, multiple testing approaches.
Data mining	Data dimension reduction, classification, unsupervised clustering.
Data visualisation	Visual representation of concepts and results.
Data pre-processing	Data storage & documentation, quality control, missing data handling.
Trackability of work	Version control, documentation with knitr/rmarkdown and best-practices in programming
Domain knowledge	Genomics, Parkinsons disease, bariatric surgery, hepatitis C & other viral infections, solid organ transplantation, multiple sklerosis, human height, critical care patients.

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## Education

Oct-2013 – (Spring 2018)	<b>PhD student</b> , <a href="#">Statistical Genetics Group</a> , <i>Institute of Social and Preventive Medicine, Lausanne University Hospital (CHUV)</i> , Lausanne, Switzerland, supervised by Prof. Zoltán Kutalik. <b>Topic:</b> Integrative statistical analysis of -omics and genome-wide association studies data.
Feb-2009 – Jun-2011	<b>Master of Science in Engineering</b> , <i>Zurich University of Applied Sciences</i> , Winterthur, Switzerland.
Oct-2005 – Oct-2008	<b>Dipl. Ing. Data Analysis and Process Design</b> , <i>Zurich University of Applied Sciences</i> , Winterthur, Switzerland.

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## Employment

Feb-2013 – Sep-2013	<b>Internship</b> , <a href="#">Statistical Genetics Group</a> , <i>Department of Medical Genetics</i> , University of Lausanne, Lausanne, Switzerland.
Feb-2012 – Mar-2013	<b>Biostatistician</b> , <a href="#">Division of Biostatistics</a> , <i>ISPMZ (now EBPI)</i> , University of Zurich, Zurich, Switzerland.
Jan-2012 – Aug-2012	<b>Biostatistician</b> , <i>Center of clinical nursing science</i> , University Hospital Zurich, Zurich, Switzerland.
Mar-2009 – Jan-2012	<b>Research Assistant</b> , <a href="#">Institute of Data Analysis and Process Design</a> , <i>Zurich University of Applied Sciences</i> , Winterthur, Switzerland.
Jul-2007 – Sep-2007	<b>Internship</b> , <i>Official Statistics Zurich</i> , Zurich, Switzerland.

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## Computing skills

Statistics/Programming	<b>R</b> [highly proficient], <b>Matlab</b> [familiar], <b>Java</b> [familiar], <b>SQL</b> [familiar]
Genomics tools	<b>Plink</b> , <b>QCTOOL</b> , <b>GTCA</b> , ...
Support	<b>GitHub</b> , <b>LaTeX</b> , <b>emacs</b> , <b>Affinity/AdobeIllustrator/Inkscape</b>
R	Daily used for statistical computing and data visualisation; familiar with the architecture of R, package development and best-practices.

Computing experience Five years of experience using high performance clusters for analysis and storage of large files.

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## Other activities

R-Ladies Founding member and co-organiser of [R-Ladies](#) Lausanne. R-Ladies is a world-wide organization to promote gender diversity in the R community.

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## Languages

**German** [native speaker, C2], **English** [fluent, C1], **French** [good command, B1]

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## Awards

- 07-Apr-2017 *The 'Human Heredity' Best Student Platform Presentation Award* at the European Mathematical Genetics Meeting in Tartu, Estonia.
- 15-Mar-2017 *Poster prize* at the ePerMed Workshop about 'Functional annotation of genome-wide variants' in Lausanne, Switzerland.
- 24-May-2016 *Lodewijk Sandkuijl Award* for an outstanding talk in the field of complex genetics and statistical genetics at the European Society of Human Genetics Conference, Barcelona, Spain.

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## Output list

### Main publications

**Sina Rüeger**, Aaron McDaid, and Zoltán Kutalik. [Improved imputation of summary statistics for realistic settings](#). *bioRxiv*, page 203927, 2017b

**Sina Rüeger**, Aaron McDaid, and Zoltán Kutalik. [Evaluation and application of summary statistic imputation to discover new height-associated loci](#). *bioRxiv*, page 204560, 2017a

**Sina Rüeger** et al. [Impact of common risk factors of fibrosis progression in chronic hepatitis C](#). *Gut*, 64(10):1605–1615, 2015