Alexej Gossmann

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AREAS OF INTEREST

Sparse Regression Models, Mixed Effects Models, Genetics, Spatial Statistics, Computational Statistics, Differential Equations

EDUCATION

PhD, Mathematics
Tulane University, New Orleans, Louisiana, expected May 2017

MS, Statistics
Tulane University, New Orleans, Louisiana, May 2014
Master's Research Project: Analysis of Bone Growth Data by Mixed-Effects SS ANOVA Methods (supervised by Dr. Lacey)
GPA: 3.975

BS, Mathematics
Technische Universität Darmstadt, Darmstadt, Germany, 2012
Thesis: On disjunction and numerical existence properties of extensions of Heyting arithmetic (supervised by Dr. Kohlenbach)
GPA: 4.0

EXPERIENCE

Teaching Experience

- *Instructor*: Calculus 1, Tulane University, Department of Mathematics, Fall 2014.
- *Co-Teacher*: Statistics for Scientists, Tulane University, Department of Mathematics, Spring 2014.
- *Teaching Assistant*: Various Statistics, Calculus, and Real Analysis courses at Tulane University and Technische Universität Darmstadt, Fall 2010 - Spring 2014.

Research Assistantship

- Development of statistical and machine learning methods for imaging-genomics in Dr. Yu-Ping Wang's group. Fall 2014 – Present.
- Testing a linear correlation between two L^2 spatial fields, supervised by Dr. Gromenko, Tulane University, Department of Mathematics. Summer 2014.

Internships

- *Google Summer of Code 2015.* Adding Linear Mixed Effects Models Support to SciRuby. Supervised by the Ruby Science Foundation. Summer 2015.

Other

- *SAMSI 2014 Mathematical and Statistical Modeling Workshop for Graduate Students.* Project: Allergy, Asthma and Exposures in the Homes of the US Population (supervised by scientists from Rho Inc.), North Carolina State University, Summer 2014.
- Kommando 1. Luftwaffendivision, Fürstenfeldbruck. Military service at the department for public relations and press. Fall 2008 – Spring 2009.

PUBLICATIONS

- A. Gossmann, S. Cao, and Y.-P. Wang. *Identification of Significant Genetic Variants via SLOPE, and its Extension to Group SLOPE.* In Proceedings of the International Conference on Bioinformatics, Computational Biology and Biomedical Informatics, BCB15, New York, NY, USA, 2015. ACM.
- S. Cao, H. Qin, A. Gossmann, H.-W. Deng, and Y.-P. Wang. *Unified Tests for Fine Scale Mapping and Identifying Sparse High-Dimensional Sequence Associations.* In Proceedings of the International Conference on Bioinformatics, Computational Biology and Biomedical Informatics, BCB15, New York, NY, USA, 2015. ACM.

TALKS AND COLLOQUIA

- Title: *Identification of Significant Genetic Variants via SLOPE, and its Extension to Group SLOPE.* The 6th ACM Conference on Bioinformatics, Computational Biology, and Health Informatics, Atlanta, GA, 2015.
- Title: *Reproducing Kernel Hilbert Spaces and Smoothing Spline Regression.* Graduate student colloquium, Tulane University, 2014.

SKILLS

Computer skills: R, Ruby, C++, Matlab, LaTeX, Linux.

Language Knowledge: Bilingual in German and Russian, fluent in English, basic knowledge of French.