Dr. Paul Schmidt

Data Scientist / Biostatistician

Hamburg, Germany

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Education

University of Hohenheim — *Stuttgart, Germany*

Dr. sc. agr. — *Sep 2015 - Nov 2019*

- DFG-funded PhD student in the biostatistics unit of Prof. Dr. Hans-Peter Piepho
- Cumulative doctoral thesis: 'Estimating heritability in plant breeding programs' graded 'very good'

Purdue University — *West Lafayette, IN, USA*

Visiting PhD student — *Sep 2015 - Dec 2015*

- Visiting PhD student in the statistical bioinformatics unit of Prof. Dr. Rebecca Whitbeck Doerge

University of Hohenheim — *Stuttgart, Germany*

MSc Crop Science: Plant Breeding — *Oct 2012 - Dec 2014*

- Specialisation in biostatistics and plant breeding
- MSc Thesis: 'Statistical Evaluation and Analysis of PACTS trials as a series of on-farm strip trials without replicates' graded 1.0

University of Hohenheim — *Stuttgart, Germany*

BSc Agribiology (in german) — *Oct 2009 - Sep 2012*

- Specialisation in plant sciences and genetics
- BSc Thesis: 'Cumulative effects of glyphosate trace concentrations during root exposition of winter wheat' graded 1.0

Alexander Central High School — *Taylorsville, NC, USA*

Student exchange year — *Aug 2006 - Jul 2007*

- Completed senior year and obtained high school diploma

Employment

BioMath - Applied Statistics and Informatics in Life Sciences — *Rostock & Hamburg, Germany*

Data scientist — *Jan 2019 - Present*

- Various statistical analyses and reports
- Implementation of systematic literature reviews and meta-analyses
- Teaching workshops in R

University of Hohenheim — *Stuttgart, Germany*

Research associate — *Sep 2015 - Dec 2018*

- Data analysis consulting for students, associates and companies
- Teaching workshops in statistics, R and SAS

BioMath - Applied Statistics and Informatics in Life Sciences — *Rostock, Germany*

Junior Data scientist — *Jan 2015 - Aug 2015*

- Statistical analyses
- Implementation of systematic literature reviews

Data Science Skills

Communication: data visualization, data analysis reports, scientific publications, presentations

Software: R, SAS, SPSS, ASReml, Excel, Word, PowerPoint, Citavi, Adobe Acrobat Pro, Latex

Statistics: (generalized) linear (mixed) models, exploratory & descriptive data analysis, experimental design

Websites:

- `https://schmidtpaul.github.io/MMFAIR/`
- `https://schmidtpaul.github.io/crashcouRse/`

Teaching

- Workshop Instructor, Real-time consultation on statistics and mixed models in R, Kassel Univ., 2d, Mar 2020
- Workshop Instructor, Basics of applied statistics, Rostock Univ., 2d, Dec 2019
- Workshop Instructor, Data science for life sciences with R (part 2), Thünen Inst., Braunschweig, 3d, Nov 2019
- Workshop Instructor, Data science for life sciences with R (part 1), Thünen Inst., Braunschweig, 3d, Oct 2019
- Workshop Instructor, Essential basics of statistics, Rostock Univ., 2d, Sep 2019
- Workshop Instructor, Mixed models with R, Thünen Inst., Braunschweig, 3d, Nov 2018
- Workshop Instructor, Implementation of yield stability assessment with ASReml-R, Bangladesh Rice Research Inst., Gazipur, Bangladesh, 3h, May 2018
- Workshop Instructor, Statistical analysis with SAS, Univ. of Hohenheim, Stuttgart, 3d, monthly 2016-2018
- Workshop Instructor, Statistical analysis with R, Univ. of Hohenheim, Stuttgart, 3d, monthly 2016-2018
- Teaching assistant, Biometrics / Statistics, Univ. of Hohenheim, Stuttgart, 4h, weekly 2014-2018

Publications

1. Buntaran, H, HP Piepho, P Schmidt, J Rydén, M Halling, and J Forkman (2020). Cross-validation of stage-wise mixed-model analysis of Swedish variety trials with winter wheat and spring barley. *Crop Science*.
2. Kukowski, S, P Schmidt, HP Piepho, M Röhl, HK Hauffe, and T Streck (2020). Auswirkungen atmosphärischer Stickstoffeinträge auf magere Flachland-Mähwiesen in Baden-Württemberg. *Natur und Landschaft* **95**(2), 58–67.
3. Schmidt, P (2020). "Estimating heritability in plant breeding programs". PhD thesis. University of Hohenheim.
4. Schmidt, P, J Hartung, J Bennewitz, and HP Piepho (2019). Heritability in plant breeding on a genotype-difference basis. *Genetics* **212**(4), 991–1008.
5. Schmidt, P, J Hartung, J Rath, and HP Piepho (2019). Estimating Broad-Sense Heritability with Unbalanced Data from Agricultural Cultivar Trials. *Crop Science* **59**(2), 525–536.
6. Schmidt, P, J Möhring, R Koch, and HP Piepho (2018). More, Larger, Simpler: How Comparable Are On-Farm and On-Station Trials for Cultivar Evaluation? *Crop Science* **58**(4), 1508–1518.
7. Tulinská, J, K Adel-Patient, H Bernard, A Líšková, M Kuricová, S Ilavská, M Horváthová, A Kebis, E Rollerová, J Babincová, et al. (2018). Humoral and cellular immune response in Wistar Han RCC rats fed two genetically modified maize MON810 varieties for 90 days (EU 7th Framework Programme project GRACE). *Archives of toxicology* **92**(7), 2385–2399.
8. Schmidt, K, J Schmidtke, P Schmidt, C Kohl, R Wilhelm, J Schiemann, H Van Der Voet, and P Steinberg (2017). Variability of control data and relevance of observed group differences in five oral toxicity studies with genetically modified maize MON810 in rats. *Archives of toxicology* **91**(4), 1977–2006.
9. Zeljenková, D, R Aláčová, J Ondrejková, K Ambrušová, M Bartušová, A Kebis, J Kovrižnych, E Rollerová, E Szabová, S Wimmerová, et al. (2016). One-year oral toxicity study on a genetically modified maize MON810 variety in Wistar Han RCC rats (EU 7th Framework Programme project GRACE). *Archives of toxicology* **90**(10), 2531–2562.