Dr. Paul Schmidt

DATA SCIENTIST / BIOSTATISTICIAN

Hamburg, Germany

☐ +49 172 3091577 | ✉ schmidtpaul1989@outlook.com | ℝ Paul_Schmidt17 | ⊙ SchmidtPaul | in schmidtpaul1989

Professional experience

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

DATA SCIENTIST / GENERAL MANAGER *Since Jan 2019*

- Various statistical analyses from raw data to final report for e.g. yearly post-market monitoring (survey; agriculture), risk assessment (meta-analysis; epidemiology), a long-term field trial (experiment; environment), geographic distribution (geospatial; administrative office)
- Implement new / streamline existing SOPs (for e.g. systematic literature reviews and meta-analyses) by making better use of in-depth functionality of established software and additionally via introducing complementing software/tools
- Supervise project communication and time management
- Conduct in-depth research, write scientific reports and proofread especially English tender application, report and publication drafts
- General manager since September 2022

Freelancer (part-time) *see 'Workshops' section below*

WORKSHOP TEACHER *Since Nov 2018*

- Develop and teach workshops on statistics in R; specific content and language according to the contractor
- Provide corresponding material on my websites (see 'Other skills' section below)

University of Hohenheim *Stuttgart, Germany*

RESEARCH ASSOCIATE *Sep 2015 - Dec 2018*

- Personalized consulting (ranging from single-appointment to project-accompanying) for students and research associates in terms of experimental design, data handling, statistical analyses and/or presentation of results
- Develop, conduct and manage yearly statistical analysis of yield stability data for external company
- Develop, organize and teach workshops in statistics, R and SAS
- Supervise student writing his MSc thesis

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

JUNIOR DATA SCIENTIST *Jan 2015 - Aug 2015*

- Streamline statistical analyses of monitoring data
- Implement SOP for systematic literature reviews

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 'magna cum laude'

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
- Arranged on personal initiative, this collaboration allowed for scientific exchange and inspiration at the beginning of my PhD

University of Hohenheim *Stuttgart, Germany*

MSc CROP SCIENCE: PLANT BREEDING *Oct 2012 - Dec 2014*

- Specialization in biostatistics and plant breeding (final grade 1.4)
- 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*

- Specialization in plant sciences and genetics (final grade 1.9)
- 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

Skills

General	collaboration, communication, structuring, time management, strategic oversight, problem solving
Languages	German (native), English (effective operational proficiency)
Open Source	Website https://schmidtpaul.github.io/dsfair_quarto/, R package BioMathR https://schmidtpaul.github.io/BioMathR/, R package CitaviR https://schmidtpaul.github.io/CitaviR/
Presentation	data visualization, data analysis reports, scientific publications, presentations
Software	R, Python, SAS, SPSS, MS Office, Adoce Acrobat Pro, Latex, C#, SQL
Statistics	(generalized) linear (mixed) models, exploratory & descriptive data analysis, experimental design

Workshops

Jul 2023	**Statistics with R - an Introduction** Universität Bonn via zoom	*12h*
May 2023	**Statistics with R - an Introduction** Universität Bonn via zoom	*12h*
Feb 2023	**Introduction to data science for exp. life sciences with R** Pro-RUWA via zoom	*24h*
Nov 2022	**Data science for exp. life sciences with R (part 2)** Thünen-Institut, Braunschweig via zoom	*20h*
Nov 2022	**Data Science in den exp. Naturwiss. mit R (Teil 2)** Thünen-Institut, Braunschweig via zoom	*20h*
Nov 2022	**Data science for exp. life sciences with R (part 1)** Thünen-Institut, Braunschweig via zoom	*20h*
Nov 2022	**Data Science in den exp. Naturwiss. mit R (Teil 1)** Thünen-Institut, Braunschweig via zoom	*20h*
Nov 2022	**Statistics with R - an Introduction** Universität Bonn via zoom	*12h*
Oct 2022	**R and the Tidyverse** FBN, Dummerstorf via zoom	*5h*
Mar 2022	**Data science for exp. life sciences with R (part 2)** Thünen-Institut, Braunschweig via zoom	*24h*
Mar 2022	**Data Science in den exp. Naturwiss. mit R (Teil 2)** Thünen-Institut, Braunschweig via zoom	*24h*
Mar 2022	**Data science for exp. life sciences with R (part 1)** Thünen-Institut, Braunschweig via zoom	*24h*
Mar 2022	**Data Science in den exp. Naturwiss. mit R (Teil 1)** Thünen-Institut, Braunschweig via zoom	*24h*
Dec 2021	**Statistics with R (Beginner)** Universität Kassel	*24h*
Jul 2021	**Data science in den Naturwiss. mit R (Teil 2)** Thünen-Institut, Braunschweig via zoom	*24h*
May 2021	**Data science in den Naturwiss. mit R (Teil 1)** Thünen-Institut, Braunschweig via zoom	*24h*
Mar 2021	**Data science in den Naturwiss. mit R (Teil 2)** Thünen-Institut, Braunschweig via zoom	*24h*
Nov 2020	**Planning exp. designs, repeated measurements, and their analyses in R** Universität Kassel via zoom	*16h*
Nov 2020	**Data science in den Naturwiss. mit R (Teil 1)** Thünen-Institut, Braunschweig via zoom	*24h*
Oct 2020	**Experimental Design - Practicals in R** CIHEAM Zaragoza via zoom	*10h*
Mar 2020	**Real-time consultation on statistics and mixed models in R** Universität Kassel	*16h*
Dec 2019	**Basics of applied statistics** Universität Rostock	*16h*
Nov 2019	**Data science for life sciences with R (part 2)** Thünen-Institut, Braunschweig	*24h*
Oct 2019	**Data science for life sciences with R (part 1)** Thünen-Institut, Braunschweig	*24h*
Sep 2019	**Essential basics of statistics** Universität Rostock	*16h*
Nov 2018	**Gemischte Modelle in R** Thünen-Institut, Braunschweig	*24h*
May 2018	**Implementation of yield stability assessment with ASReml-R** Bangladesh Rice Res. Inst., Gazipur	*4h*
2016-2018	**Statistical analysis with SAS (monthly)** Universität Hohenheim, Stuttgart	*18h*
2016-2018	**Statistical analysis with R (monthly)** Universität Hohenheim, Stuttgart	*18h*

Scientific publications

1. Friedrichs, P., Schmidt, P., & Schmidt, K. (2021). *Protanopie und protanomalie bei berufskraftfahrern und berufskraftfahrerinnen - prävalenz und unfallrisiko: = protanopia and protanomaly among professional drivers: Prevalence and accident risk: Vols. Heft 319.* https://bast.opus.hbz-nrw.de/frontdoor/index/index/searchtype/series/id/5/start/1/rows/25/docId/2574

2. Schmidt, K., Friedrichs, P., Cornelsen, H. C., Schmidt, P., & Tischer, T. (2021). *Musculoskeletal disorders among children and young people: Prevalence, risk factors, preventive measures: A scoping review.* https://doi.org/10.2802/511243

3. Buntaran, H., Piepho, H.-P., Schmidt, P., Rydén, J., Halling, M., & Forkman, J. (2020). Cross–validation of stagewise mixed–model analysis of swedish variety trials with winter wheat and spring barley. *Crop Science*, *60*(5), 2221–2240. https://doi.org/10.1002/csc2.20177

4. Kukowski, S., Schmidt, P., Piepho, H.-P., Röhl, M., Hauffe, H.-K., & Streck, T. (2020). Auswirkungen atmosphärischer stickstoffeinträge auf magere flachland-mähwiesen in baden-württemberg. *Natur Und Landschaft*, *95*(2), 58–67. https://doi.org/10.17433/2.2020.50153773.58-67

5. Schmidt, P. (2019). *Estimating heritability in plant breeding programs.* http://opus.uni-hohenheim.de/volltexte/2020/1720/

6. Schmidt, P., Hartung, J., Bennewitz, J., & Piepho, H.-P. (2019). Heritability in plant breeding on a genotype-difference basis. *Genetics*, *212*(4), 991–1008. https://doi.org/10.1534/genetics.119.302134

7. Schmidt, P., Hartung, J., Rath, J., & Piepho, H.-P. (2019). Estimating broad-sense heritability with unbalanced data from agricultural cultivar trials. *Crop Science*, *59*(2), 525–536. `https://doi.org/10.2135/cropsci2018.06.0376`

8. Schmidt, P., Möhring, J., Koch, R. J., & Piepho, H.-P. (2018). More, larger, simpler: How comparable are on-farm and on-station trials for cultivar evaluation? *Crop Science*, *58*(4), 1508–1518. `https://doi.org/10.2135/cropsci2017.09.0555`

9. Tulinská, J., Adel-Patient, K., Bernard, H., Líšková, A., Kuricová, M., Ilavská, S., Horváthová, M., Kebis, A., Rollerová, E., Babincová, J., Aláčová, R., Wal, J.-M., Schmidt, K., Schmidtke, J., Schmidt, P., Kohl, C., Wilhelm, R., Schiemann, J., & Steinberg, P. (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. `https://doi.org/10.1007/s00204-018-2230-z`

10. Schmidt, K., Schmidtke, J., Schmidt, P., Kohl, C., Wilhelm, R., Schiemann, J., van der Voet, H., & Steinberg, P. (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. `https://doi.org/10.1007/s00204-016-1857-x`

11. Zeljenková, D., Aláčová, R., Ondrejková, J., Ambrušová, K., Bartušová, M., Kebis, A., Kovrižnych, J., Rollerová, E., Szabová, E., Wimmerová, S., Černák, M., Krivošíková, Z., Kuricová, M., Líšková, A., Spustová, V., Tulinská, J., Levkut, M., Révajová, V., Ševčíková, Z., … Steinberg, P. (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. `https://doi.org/10.1007/s00204-016-1798-4`