Dr. Holger Sennhenn-Reulen

Curriculum Vitae

February, 2022

Contents

1 Personal Details

Profession

Statistician

Affiliations

↪ *Department of Forest Growth, Northwest German Forest Research Institute (NW-FVA).*
↪ Associated member @ RTG 2300: *Enrichment of European beech forests with conifers.*

E-Mail

holger.sennhenn at nw-fva.de

Telephone

+49 551 69401 206

Website

https://uncertaintree.github.io/

Address (professional)

Nordwestdeutsche Forstliche Versuchsanstalt
Grätzelstrasse 2
37079 Göttingen
Germany

Birth

13/01/1986, Giengen an der Brenz, Germany

Citizenship

Germany

Family status

Married, two children

2 Working Experience

2.1 In Academia

09/2017 – present
Statistician, *Department of Forest Growth*, *Northwest German Forest Research Institute (NW-FVA):* Consultation on study design and statistics/data analysis. Execution of statistical analysis for research projects, assistance in writing of reports and publications, methodological teaching, development of statistical methodology.

10/2015 – 08/2017
Statistician, *Leibniz-ScienceCampus Primate Cognition:* Organization and holding of Biostatistics workshops and courses, development of a teaching concept *Biostatistics* for PhD students, statistical consulting, contribution to research projects of the Leibniz-ScienceCampus.

01/2012 – 09/2015
Teaching/research assistant, *Chair of Statistics*, *Faculty of Economic Sciences*, *Georg-August-University Göttingen:* Assistance in the supervision of theses and holding classes at the Faculty of Economic Sciences.

04/2011 – 12/2011
Research/student assistant, *Division of Epidemiology*, *Institute of Social Paediatrics and Adolescent Medicine*, *Ludwig-Maximilians-University Munich:* Statistical analysis of child growth data.

10/2009 – 03/2011
Student assistant, *Statistical Consulting Unit (StaBLab)*, Department of Statistics, *Ludwig-Max- imilians-University Munich (LMU):* Statistical consultation and supervision of the statistical practical training for bachelor students in Statistics.

2.2 Outside Academia

12/2008 – 09/2009
Student employee, *Group Market Management*, *Allianz SE:* Invoice control, database administration.

09/2005 – 05/2006
Civil service, *Paul-Gerhardt-Stift Giengen an der Brenz:* Mobile social service.

3 Education

3.1 University

01/2012 – 03/2015

Doctoral studies (*Dr. rer. pol.*) at *Chair of Statistics*, Faculty of Economic Sciences, Georg-August-University Göttingen.

↪ Title of dissertation: *Modelling Combined Transition-type Effects in Multi-state Models* (Grade: magna cum laude). Supervisors: Prof. Dr. Thomas Kneib, Prof. Dr. Helmut Herwartz, Prof. Dr. Tatyana Krivobokova.

↪ *Associated member* of *RTG 1644: Scaling Problems in Statistics*, with completing the study program containing methodological and skill courses.

10/2009 – 09/2011

Masters studies (*M. Sc.*) in *Statistics*, Department of Statistics, Ludwig-Maximilians-University Munich (LMU). Overall grade: 1.33.

↪ Title of master thesis (English translation): *When do effects of risks emerge? Modelling longitudinal BMI measurements across childhood by flexible Quantile Regression* (Grade: 1.0). Supervisor: Prof. Dr. Torsten Hothorn.

10/2006 – 09/2009

Bachelor studies (*M. Sc.*) in *Statistics* (Application field: *Medical Biometry*), Department of Statistics, Ludwig-Maximilians-University Munich (LMU). Overall grade: 1.77.

↪ Title of bachelor thesis (English translation): *Spatial Smoothing using Kriging* (Grade: 1.3). Supervisor: Prof. Dr. Gerhard Tutz.

3.2 Primary and Secondary School

08/1996 – 07/2005

Margarete-Steiff-Gymnasium, Giengen an der Brenz.

08/1992 – 07/1996

Grundschule Schwageschule, Giengen an der Brenz.

4 Publications & Scientific Activities

4.1 Peer-Reviewed

Submitted

N. von Lüpke, H. Sennhenn-Reulen (shared 1ˢᵗ authors):
Quantifying success share and plant density of direct seeding of Douglas fir using a hurdle negative binomial regression model.

D. Tamke, H. Sennhenn-Reulen, R. Petersen:
Initiale Entwicklung von Eiche nach Bodenbearbeitung (im Nordwesten Deutschlands).

2022

L. Zeller, C. Baumann, P. Gonin, L. Heidrich, C. Keye, F. Konrad, L. Larrieu, P. Meyer; H. Sennhenn-Reulen, J. Müller, P. Schall, C. Ammer:
Index of biodiversity potential (IBP) versus direct species monitoring in temperate forests, Ecological Indicators.
DOI: https://doi.org/10.1016/j.ecolind.2022.108692

2019

L. Demant, P. Meyer, H. Sennhenn-Reulen, H. Walentowski, E. Bergmeier:
Seeking consensus in German forest conservation: An analysis of contemporary concepts, Nature Conservation.
DOI: https://doi.org/10.3897/natureconservation.35.35049

A. Mölder, H. Sennhenn-Reulen, C. Fischer, H. Rumpf, E. Schönfelder, J. Stockmann, R.-V. Nagel:
Success factors for high-quality oak forest (Quercus robur, Q. petraea) regeneration, Forest Ecosystems.
DOI: https://doi.org/10.1186/s40663-019-0206-y

2018

A. Goffe, J. Fischer, H. Sennhenn-Reulen:
Bayesian inference and simulation approaches improve the assessment of Elo-ratings in the analysis of social behaviour, Methods in Ecology and Evolution.
DOI: https://doi.org/10.1111/2041-210X.13072

2017

L. Almeling, K. Hammerschmidt, H. Sennhenn-Reulen, A. Freund, J. Fischer:
Social interactions and activity patterns of old Barbary macaques: further insights into the foundations of social selectivity, American Journal of Primatology.
DOI: https://doi.org/10.1002/ajp.22711

H. Sennhenn-Reulen, L. Diedhiou, M. Klapproth, D. Zinner:
Estimation of baboon daily travel distances by means of point sampling – the magnitude of underestimation, Primate Biology.
DOI: http://doi.org/10.5194/pb-4-143-2017

J. Fischer, M.S. Farnworth, H. Sennhenn-Reulen, K. Hammerschmidt:
Quantifying Social Complexity, Animal Behaviour.
DOI: `http://doi.org/10.1016/j.anbehav.2017.06.003`.

W. Hammerschmidt, H. Sennhenn-Reulen, A. Schacht:
Associated motivational salience impacts early sensory processing of human faces, NeuroImage.
DOI: `http://doi.org/10.1016/j.neuroimage.2017.04.032`.

2016

H. Sennhenn-Reulen, T. Kneib:
Structured Fusion Lasso Penalised Multi-State Models, Statistics In Medicine.
DOI: `http://dx.doi.org/10.1002/sim.7017`.

L. Almeling, K. Hammerschmidt, H. Sennhenn-Reulen, A.M. Freund, J. Fischer:
Motivational shifts in aging monkeys and the origins of social selectivity, Current Biology.
DOI: `http://dx.doi.org/10.1016/j.cub.2016.04.066`.

A. Álvaro-Meca, M. Jiménez-Sousa, A. Boyer, J. Medrano, H. Reulen, T. Kneib, S. Resino:
Impact of chronic hepatitis C on mortality in cirrhotic patients admitted to intensive-care unit,
BMC Infectious Diseases.
DOI: `http://dx.doi.org/10.1186/s12879-016-1448-8`.

2015

V. Schmitt, I. Federspiel, J. Eckert, S. Keupp, L. Tschernek, L. Faraut, R. Schuster, C. Michels,
H. Sennhenn-Reulen, T. Bugnyar, T. Mussweiler, J. Fischer:
Do monkeys compare themselves to others?, Animal Cognition.
DOI: `http://dx.doi.org/10.1007/s10071-015-0943-4`.

H. Reulen, T. Kneib:
Boosting Multi-State Models, Lifetime Data Analysis.
DOI: `http://dx.doi.org/10.1007/s10985-015-9329-9`.

2013

I. Nehring, A. Chmitorz, H. Reulen, R. von Kries, R. Ensenauer:
*Gestational Diabetes Predicts the Risk of Childhood Overweight and Abdominal Circumference
Independent of Maternal Obesity*, Diabetic Medicine.
DOI: `http://dx.doi.org/10.1111/dme.12286`.

I. Podolski, E. Belotti, L. Bufka, H. Reulen, M. Heurich:
*Seasonal and Daily Activity Patterns of Free-Living Eurasian Lynx (Lynx Lynx) in Relation to
Availability of Kills*, Wildlife Biology.
DOI: `http://dx.doi.org/10.2981/12-049`.

2012

R. von Kries, H. Reulen, O. Bayer, C. Riedel, K. Diethelm, A. E. Buyken:
*Increase in Prevalence of Adiposity Between the Ages of 7 and 11 Years Reflects Lower Remission
Rates During this Period*, Pediatric Obesity.
DOI: `http://dx.doi.org/10.1111/j.2047-6310.2012.00084.x`.

M. Heurich, L. Möst, G. Schauberger, H. Reulen, P. Sustr, T. Hothorn:
Survival and Causes of Death of European Roe Deer Before and After Eurasian Lynx Introduction in the Bavarian Forest National Park, European Journal of Wildlife Research.
DOI: `http://dx.doi.org/10.1007/s10344-011-0606-y`.

2011

S. Schorn, K. Pfister, H. Reulen, M. Mahling, C. Silaghi:
Occurrence of Babesia spp., Rickettsia spp. and Bartonella spp. in Ixodes Ricinus in Bavarian Public Parks, Germany, Parasites & Vectors.
DOI: `http://dx.doi.org/10.1186/1756-3305-4-135`.

S. Schorn, K. Pfister, H. Reulen, M. Mahling, J. Manitz, C. Thiel, C. Silaghi:
Prevalence of Anaplasma Phagocytophilum in Ixodes Ricinus in Bavarian Public Parks, Germany, Ticks and Tick-Borne Diseases.
DOI: `http://dx.doi.org/10.1016/j.ttbdis.2011.09.009`.

4.2 Conference Papers & Talks

2021 N. von Lüpke, H. Sennhenn-Reulen: Bestimmung des Kulturerfolgs von Douglasien-Direktsaaten durch Hurdle-Negativ-Binomialverteilungs-Regression
@ Jahrestagung Sektion Waldbau, Verband Deutscher Forstlicher Versuchs- & Forschungsanstalten.

D. Tamke, U. Talkner, H. Sennhenn-Reulen: Auswirkung von Bodenbearbeitungen auf den Nährstofffluss in Waldböden
@ FowiTa (Forstwissenschaftliche Tagung, Online).

H. Sennhenn-Reulen, N. von Lüpke: Quantifying Success Share and Plant Density of Direct Seeding of Douglas Fir Using a Hurdle Negative Binomial Regression Model
@ Research Seminar of the Chairs of Statistics & Econometrics, University of Göttingen (Online).

N. von Lüpke, H. Sennhenn-Reulen: Bestimmung des Kulturerfolgs von Douglasien-Direktsaaten durch Hurdle-Negativ-Binomialverteilungs-Regression
@ Jahrestagung Sektion Ertragskunde, Verband Deutscher Forstlicher Versuchs- & Forschungsanstalten (Online).

2020 H. Sennhenn-Reulen: Bayesianische Modellierung zur Schätzung und Gewichtung von Wachstumsfunktionen
@ Workshop "Uncertainty of Measurement, sampling statistics, theory of probability, and metrology" of the Working Groups Ecology and Environment, Bayes Methods, Spatial Statistics (Internat. Biometric Society, German Region) and Biometry (German Assoc. of Forest Research Stations, DVFFA)
(Cancelled due to Covid-19 pandemic)

2019 H. Sennhenn-Reulen: Learning to fly, but we ain't got wings: Model-configuration-space shifts in applied statistical models using the probabilistic-programming-language Stan
@ RTG 1644 'Scaling Problems in Statistics' Closing Workshop

2018

L. Demant, P. Meyer, H. Sennhenn-Reulen, H. Walentowski, E. Bergmeier: Is there a consensus in German forest conservation? Targeting forest conservation with compensatory payments
@ European Conference on Computational Biology

J. Sauer, H. Sennhenn-Reulen, J. Nagel: Struktur und Dynamik von Mischbeständen mit Buche, Fichte und Douglaise
@ Jahrestagung Sektion Ertragskunde, Verband Deutscher Forstlicher Versuchs- & Forschungsanstalten

A. Kistemaker, H. Sennhenn-Reulen, M. Albert, J. Nagel: Zum Phänomen des Umsetzens – ein altes Thema neu aufgegriffen
@ Jahrestagung Sektion Ertragskunde, Verband Deutscher Forstlicher Versuchs- & Forschungsanstalten

2014

H. Reulen, T. Kneib: Sparse Multi-State Modelling
@ Session "New Software Developments for Competing Risks and Multi-State Models", 7. International Conference of "European Consortium for Informatics and Mathematics (ERCIM) Working Group on Computing and Statistics"

2013

H. Reulen, T. Kneib: Boosting Multi-State Models
@ Session "Estimating and Modeling Functionals in Multistate Models", International Conference of "European Consortium for Informatics and Mathematics (ERCIM) Working Group on Computing and Statistics"

H. Reulen, T. Kneib: Boosting Multi-State Models
@ 28th "International Workshop on Statistical Modelling"

2012 H. Reulen, T. Kneib: Modelling Interval Censored Multi-State Models Using Multi-Step Transition Probabilities
@ 5. International Conference of "European Consortium for Informatics and Mathematics (ERCIM) Working Group on Computing and Statistics"

2011 H. Reulen: Variable selection by boosting
@ RTG 1644 'Scaling Problems in Statistics' Seminar

4.3 Working papers & Pre-Prints

2018

H. Sennhenn-Reulen:
Bayesian Regression for a Dirichlet Distributed Response using Stan, Arxiv.
URL: `https://arxiv.org/abs/1808.06399`

4.4 Reviewing Service

2020

Forest Ecology and Management

2017

Computational and Mathematical Methods in Medicine

2014

Journal of Statistical Software

The Annals of Applied Statistics

2013

Statistics in Medicine

5 Teaching

2021/22

Tutorials for *Statistical Modelling and Advanced Regression Analyses*
@ RTG 2300: Enrichment of European beech forests with conifers

2021

Introduction to R (Block-course, 12 hours, English)
@ RTG 2300: Enrichment of European beech forests with conifers

Introduction to Study Design (2 hours, English)
@ RTG 2300: Enrichment of European beech forests with conifers

2018

Statistical Modelling and Advanced Regression Analyses (English, 15 hours, with T. Kneib and N. Klein)
@ RTG 2300: Enrichment of European beech forests with conifers

2017/18

Einführung in R (German, 12 hours)
@ Northwest German Forest Research Institute

2017

Basic Regression Modeling (Block-course, 20 hours, English)
@ ScienceCampus 'Primate Cognition'

Introduction to R (Block-course, 12 hours, English)
@ ScienceCampus 'Primate Cognition'

Basic Mathematics and Statistics (Block-course, 12 hours, English)
@ ScienceCampus 'Primate Cognition'

2016

Introduction to Bayesian Statistics (Block-course, 18 hours, English)
@ ScienceCampus 'Primate Cognition'

R for Advanced Users (Block-course, 18 hours, English)
@ ScienceCampus 'Primate Cognition'

Introduction to Mixed Models (Block-course, 12 hours, English, with T. Kneib and P. Pütz)
@ ScienceCampus 'Primate Cognition'

Basic Regression Modeling (Block-course, 18 hours, English)
@ ScienceCampus 'Primate Cognition'

Basic Mathematics and Statistics (Block-course, 12 hours, English)
@ ScienceCampus 'Primate Cognition'

2015

Lineare Modelle (Tutorials, German)
@ Georg-August-University Göttingen

2014/15

Introduction to R (Lectures & tutorials, English)
@ Georg-August-University Göttingen

Practical Statistical Training (Practical, English/German, with T. Kneib)
@ Georg-August-University Göttingen

2014

Lineare Modelle (Tutorials, German)
@ Georg-August-University Göttingen

2013/14

Introduction to R (Lectures & tutorials, English)
@ Georg-August-University Göttingen

Introduction to Mixed Models and Spatial Statistics (Tutorials, English)
@ Georg-August-University Göttingen

Preparation Course for Econometrics I (Block-course, English, with B. Säfken)
@ Georg-August-University Göttingen

2013

Lineare Modelle (Tutorials, German)
@ Georg-August-University Göttingen

Introduction to R (Lectures & tutorials, English, with E. Waldmann)
@ Georg-August-University Göttingen

Preparation Course for Econometrics I (Block-course, English, with B. Säfken)
@ Georg-August-University Göttingen

Applied Statistical Modeling (Tutorials, English)
@ Georg-August-University Göttingen

Graduate Seminar in Applied Statistics (Seminar, English, with T. Kneib)
@ Georg-August-University Göttingen

Introduction to LaTeX (Block-course, English)
@ Georg-August-University Göttingen

2012

Lineare Modelle (Tutorials, German)
@ Georg-August-University Göttingen

R und LaTeX: Werkzeuge für Abschlussarbeiten mit empirischem/quantitativem Hintergrund
(Block-course, German, with J. Furche, E. Waldmann and T. Kneib)
@ Georg-August-University Göttingen

2010/11

Statistisches Anfängerpraktikum (Practical, German, with H. Wagner)
@ Ludwig-Maximilians-University Munich

2009/10

Statistisches Anfängerpraktikum (Practical, German, with H. Küchenhoff)
@ Ludwig-Maximilians-University Munich