DAGStat 2016

4th Joint Statistical Meeting
March, 14-18, 2016, Göttingen
Statistics under one umbrella

Program

Contents

Welcome

Dear participants,

This year, we are celebrating the fourth joint statistical meeting in Germany hosted by the Georg-August-University Göttingen. After 2007 in Bielefeld, 2010 in Dortmund and 2013 in Freiburg, the tradition of "Statistik unter einem Dach", which translates to "statistics under one umbrella", has become an established institution. This time, the meeting includes three annual meetings of societies which are members of the Deutsche Arbeitsgemeinschaft Statistik (DAGStat,) which is an umbrella association of 14 German statistics societies. The annual meetings are the

62. Biometrisches Kolloquium,

Pfingsttagung der Deutschen Statistischen Gesellschaft,

40. Jahrestagung der Gesellschaft für Klassifikation.

In particular, the 40th annual meeting of the German Classification Society is the reason for a special celebration. Moreover, the DAGStat had its 10th anniversary last year which is celebrated in this meeting as well. Aren't these enough reasons to enjoy a stimulating and certainly exciting conference?

DAGStat 2016 in Göttingen provides a forum for statisticians from all shades and all fields including econometrics, biostatistics, official statistics and mathematics to name just a few. The setting of the conference allows participants to interact and learn from each other. Econometric analyses are accompanied by biometrical talks, epidemiological research is presented besides new methodological ideas. Such versatile view and understanding of statistics is and has always been at the heart of the DAGStat since its foundation in 2005. Statistics today is a vivid and active research discipline which is influencing more and more fields of our daily life with new areas such as data science emerging.

The conference has been organized by numerous people, some in the foreground and many in the background. The DAGStat executive board wants to thank all who made this conference happen, in particular we thank the local organizers, the team around Prof. Kneib and Dr. Irmer.

We hope that all participants enjoy the meeting. We encourage you to take advantage of the wide range of talks. Do appreciate meeting colleagues and old friends,

build up new contacts and collaborations. And last but not least we are welcoming young-career statisticians. Some of whom will be awarded prizes for outstanding work by the DStatG, GfKl and the IBS-DR in a dedicated session. Let us all enjoy being part of the big statistical family. Welcome to DAGStat 2016!

Christine Müller
Chair of the DAGStat

Karl Mosler
Vice Chair of the DAGStat

Tim Friede
President of the IBS DR

Berthold Lausen
Chair of the GfKl

Wolfgang Schmid
President of the DStatG

Dear colleagues and friends,

on behalf of the local organizing committee, it is my pleasure to welcome all of you to the fourth joint statistical meeting of the German Consortium for Statistics (Deutsche Arbeitsgemeinschaft für Statistik, DAGStat) hosted at the Georg-August-Universität Göttingen. Hopefully, this meeting will continue the success story of the previous DAGStat-conferences which took place in Freiburg in 2013, in Dortmund in 2010 and in Bielefeld in 2007. As always, a large conference like this one is a joint effort by many. In particular, our thanks go out to the members of the local organizing committee, the members of the scientific program committee and to all colleagues from the Chairs of Statistics and Econometrics and the Centre for Statistics for devoting hours and hours of hard work to the success of this conference.

Göttingen's university has a long history and this history has strong connections to statistics. In the 18th century, Gottfried Achenwall has been professor in Göttingen and – although not being the inventor of the word statistics as is often falsely claimed – he significantly to shaping statistics as a science providing quantitative information on all aspects concerning the citizens of a state. While nowadays statistics is of course a much broader discipline covering aspects ranging from mathematical theory over computer science and statistical modelling to data analysis, Achenwall is still considered as one of the founders of statistical science. Therefore Göttingen can also be considered as one of the cradles of statistics. A second character certainly associated with Göttingen and statistics is Carl Friedrich Gauß, the "mathematicorum principi" or "foremost of all mathematicians". While the debate about whether Adrien-Marie Legendre or indeed Gauß invented the principles of least squares estimation will probably remain unsolved, it is certainly undisputed that Gauß laid the foundations for many aspects of modern statistics. To mention only a view, there are the Gaussian elimination for solving linear systems of equations, the Gauß quadrature for the numerical evaluation of integrals, the Gaussian process, and of course the normal distribution – although there are dozens of further mathematical concepts named after Gauß.

Today, making contributions of such a wide reach and general importance as Gauß did has become much more difficult. Yet, one general observation in basically all scientific disciplines is the reliance on quantitative methods, data analysis, data mining, bioinformatics, big data, data science or simply statistics. Statistics has turned into one of the most important interdisciplinary sciences of the information era and is an important tool for all applied scientists with a quantitative focus. It is a real pleasure to be part of this conference whose diversity in topics and foci reflects this recent trend towards an increasing interest in statistics. In particular, the conference brings together participants with a broad range of background and experiences, starting from mathematical statistics and ranging to all areas of ap-

plication of statistics. This broadness is reflected in the topics of the conference as well as the excellent selection of invited and plenary speakers and is certainly fostered by the accompanying social program of the conference.

I am very much looking forward to the conference and the interaction with all of you. Enjoy the scientific as well as social program and also take the chance to enjoy your time in the city of Göttingen as well.

Thomas Kneib
Chair of the Local Organizing Committee

Conference Organizers

The Deutsche Arbeitsgemeinschaft Statistik (DAGStat) is a network of scientific and professional organizations that develop and promote statistical theory and methodology.

- Deutsche Statistische Gesellschaft

- Internationale Biometrische Gesellschaft - Deutsche Region

- Fachgruppe Stochastik der DMV
  (Deutsche Mathematiker-Vereinigung)

- Gesellschaft für Klassifikation e.V.

- Verband Deutscher Städtestatistiker

- Fachbereich Biometrie der Deutschen Gesellschaft für Medizinische Informatik, Biometrie und Epidemiologie e.V.

- Verein zur Förderung des schulischen Stochastikunterrichts e.V.

- Deutsche Gesellschaft für Epidemiologie e.V.

- Ökonometrischer Ausschuss des Vereins für Socialpolitik

- Fachgruppe Methoden und Evaluation der DGPs
  (Deutsche Gesellschaft für Psychologie)

- Sektion Methoden der empirischen Sozialforschung der DGS
  (Deutsche Gesellschaft für Soziologie)

- European Network for Business and Industrial Statistics - Deutsche Sektion

- Statistisches Bundesamt

- Sektion Methoden der DVPW
  (Deutsche Vereinigung für Politische Wissenschaft)

Scientific Committee

Chairs:

Christine Müller	Technische Universität Dortmund
Berthold Lausen	University of Essex, Colchester
Jürgen Kübler	CSL Behring, Marburg
Wolfgang Schmid	Europa Universität Viadrina, Frankfurt O.

Committee:

Sigrid Behr	Novartis, Basel
Ralf Bender	IQWIG, Köln
Jan Beyersmann	Universität Ulm
Andreas Eichler	Universität Kassel
Tim Friede	Georg-August-Universität Göttingen
Helmut Herwartz	Georg-August-Universität Göttingen
Heinz Holling	Westfälische Wilhelms-Universität Münster
Hajo Holzmann	Philipps Universität Marburg
Hans Kestler	Universität Ulm
Thomas Kneib	Georg-August-Universität Göttingen
Karin Kurz	Georg-August-Universität Göttingen
Peter Schmidt	Statistisches Bundesamt
Kai-Uwe Schnapp	Universität Hamburg
Jürgen Wellmann	Westfälische Wilhelms-Universität Münster

Local Organization

Thomas Kneib
Helmut Herwartz
Dörte Dede
Henriette Irmer

Conference Program

We invite you to join the 4th Joint Statistical Meeting DAGStat 2016 in Göttingen. The meeting includes the 62. "Biometrische Kolloquium", the "Pfingsttagung der Deutschen Statistischen Gesellschaft" and the 40. "Jahrestagung der Gesellschaft für Klassifikation".

According to the motto "Statistics under one umbrella", contributions of all fourfeen societies that form the DAGStat will be included in the conference program. The plenary presentations will address current topics which are of interest for statisticians of all different areas of application.

Talks from a great variety of topics from different fields of applications such as medicine, economics, and engineering will allow and support an exchange of statistical methods and thus encourage interesting and inspiring scientific discussions.

DAGStat conferences are international conferences. The conference languages will be English and German. We welcome oral contributions in both English and German. Participants who will speak in German are encouraged to prepare their slides in English. We also encourage you to prepare posters in English.

Scientific Program

Topics

- Big Data and Data Science (Organizers: Iris Pigeot and Eyke Hüllermeier)

- Bioinformatics (Organizers: Hans Kestler and Jörg Rahnenführer)

- Cluster Analysis and Classification (Organizers: Claus Weihs and Joachim Mucha)

- Computational Statistics and Statistical Software (Organizers: Achim Zeileis and Matthias Schmid)

- Data Analysis and Marketing (Organizers: Yasemin Boztug and Daniel Baier)

- Design of Experiments (Organizers: Rainer Schwabe and Norbert Benda)

- Destroying data as a means of data protection - is it ethical? (Organizers: Iris Pigeot and Ronja Foraita)

- Education for Statistics in Practice (Organizers: Stephanie Roll and Christoph Muysers)

- Empirical Economics and Applied Econometrics (Organizers: Winfried Pohlmeier and Axel Werwatz)

- Graphical Models and Causal Inference (Organizers: Vanessa Didelez and Andreas Geyer-Schulz)

- Machine Learning (Organizers: Myra Spiliopoulou and Berthold Lausen)

- Mathematical Statistics in Life Science (Organizers: Jan Beyersmann and Markus Pauly)

- Methods for Risk and Benefit Assessment (Organizers: Jürgen Kübler, Ralf Bender and Angelika May)

- Multilevel and Panel Data Analysis (Organizers: Hans-Hürgen Andress and Kilian Seng)

- Observational Studies (Organizer: Siegrid Behr, Irene Schmidtmann)

- Official and Survey Statistics (Organizers: Peter Schmidt and Hans Kiesl)

- Penalized and Regularized Regression Analysis (Organizers: Tim Friede and Thomas Kneib)

- Psychometrics (Organizers: Carolin Strobl and Andreas Frey)

- Research Synthesis and Meta Analysis (Organizers: Heinz Holling and Ralf Bender)

- Robust and Nonparametric Statistics (Organizers: Claudia Becker and Roland Fried)

- Small Area Analysis and Spatial Statistics (Organizers: Susanne Schnorr-Bäcker, Hartmut Bömermann and Volker Schmid)

- Statistics in Agriculture and Ecology (Organizers: Roland Langrock, Friedrich Leisch and Hans-Peter Piepho)

- Statistics in Clinical and Preclinical Research (Organizers: Meinhard Kieser and Richard Vonk)

- Statistics in Finance (Organizers: Yarema Okhrin and Roman Liesefeld)

- Statistics in Natural Sciences and Technology (Organizers: Sonja Kuhnt and Sven Knoth)

- Statistics of High Dimensional Data (Organizers: Tim Beißbarth and Taras Bodnar)

- Structural Equation Modelling (Organizers: Rolf Steyer and Helmut Herwartz)

- Survival and Event History Analysis (Organizers: Steffen Unkel and Udo Kamps)

- Time Series Analysis (Organizers: Claudia Kirch and Philipp Sibbertsen)

- Visualisation and Exploratory Data Analysis (Organizer: Christian Hennig)

- Young Statisticians (Organizers: Anke Hüls and Benjamin Hofner)

- Open Topics (Organizers: Christine Müller and Thomas Kneib)

Tutorials

Event Data Analysis

Time: Monday, March 14, 9:00 am - 5:00 pm
Location: Verfügungsgebäude, VG1.103
Presenter: Robin Henderson

Standard survival analysis is concerned with time to a single event. Event history analysis connects together several events for each individual.

This tutorial provides a general introduction to event history analysis based primarily on counting process methods. The aim is to give a flavour of ideas and methods for a range of event history problems rather than provide full detail of any one. The mathematical content will be very light and there will be hands-on computing sessions based mainly on methods that can be applied using the standard survival package in R.

The day will be divided into four sessions, each consisting of a talk followed by a computer session. The first session will include an introduction to counting processes and a comparison between single-event survival and more general event history problems. Session 2 introduces regression models and then frailty for both heterogeneity and clustered and multivariate survival data. Session 3 turns to general event history with time-varying effects and time-varying and dynamic covariates. Finally in Session 4 we provide an introduction to competing risks analysis.

Copulae in Practice

Time: Monday, March 14, 9:00 am - 5:00 pm
Location: Verfügungsgebäude, VG1.104
Presenter: Ostap Okhrin

The course will cover theoretical as well as applied topics of Copulas. Theoretical introduction into copula modeling, their problematic, and current strand of the literature will be discussed first. Later some copula packages (copula, HAC, gofCopula) will be considered in the life examples with the brief overview of the existing other copula packages in R. Afterwards special attention will be paid to the copula in time series modeling (adaptive estimation, hidden Markov models, copula for high frequency data).

Evidence Synthesis / Meta-Analysis

Time: Monday, March 14, 9:00 am - 5:00 pm
Location: Verfügungsgebäude, VG1.102
Presenter: Guido Knapp, Gerta Rücker and Guido Schwarzer

Evidence synthesis is used for decision making in various fields of applications, for instance, social sciences, medicine, psychology, ecology, and economics if multiple sources of evidence should be combined quantitatively. In this tutorial we will discuss several methods for combining information from several independent studies or experiments and show how to conduct analyses using the statistical software R. Focus of this tutorial will be model building and data analysis.

The tutorial is organized as follows: First, we will present the basics of generic fixed-effect and random-effects meta-analysis models for comparing two interventions. Especially, various estimators for the heterogeneity parameter will be presented. Then, the use of these models will be demonstrated for various effect sizes of normal, discrete, and survival outcomes like standardized mean difference, correlation coefficient, risk difference, odds ratio, or hazard ratio. Beyond the standard meta-analysis model for binary data, the use of unconditional and conditional generalized mixed linear models will be discussed if data are available as 2×2-tables. The next topic is meta-regression which can be used for exploring heterogeneity of study results or for identifying good predictor variables for the outcome variable. Meta-regression techniques can also be used for subgroup analysis which will be discussed next. Then, we will study the so-called small study effect, which is a generic term for the phenomenon that smaller studies show larger treatment effects than larger ones. In case of more than one outcome variable, we arrive at multivariate meta-analysis. How to deal with this situation will be the next topic. Finally, methods for comparing more than two interventions, the so-called network meta-analysis also known as multiple or mixed treatment comparison, will be discussed.

Introduction to Integer-Valued Time Series

Time: Monday, March 14, 9:00 am - 5:00 pm
Location: Verfügungsgebäude, VG1.101
Presenter: Christian Weiss

We start with a brief survey of common count data models and their stochastic properties. In particular, we discuss dispersion properties and types of generating functions, the latter being useful tools when analyzing such count data models.

Then we shall turn to the case of time-dependent counts, a topic that has attracted a lot of research activity during the last years. We start with one of first approaches to model such count data time series, the INAR(1) model by McKenzie (1985). This model uses the binomial thinning operator by Steutel and van Harn (1978) and can be understood as a special type of branching process with immigration. Stochastic properties of this model are discussed in great detail, including some current research results in this area. Also extensions of this model, to higher model orders or by using different types of thinning operators, are briefly considered. Finally, to conclude the part on thinning-based models, the binomial AR(1) model for finite counts is addressed in some details. Models from the INARMA family are also used to illustrate approaches for parameter estimation and diagnostic tests. These methods are applied to real-data time series using the statistical software R. Another popular approach for modeling stationary processes of counts are the IN-GARCH models, which are particularly attractive for overdispersed counts. Results concerning the basic model with a conditional Poisson distribution are presented, but also generalizations with, e.g., a binomial or negative binomial conditional distribution are considered. Again, data applications are presented. The lecture concludes with a brief survey of further alternatives like NDARMA, Hidden Markov or regression models.

Plenary Speakers

Peter Rousseeuw (Uni Leuven, BE)
Detecting cellwise outliers
15.3 Opening Tuesday, 10:40am ZHG011

Simon Thompson (University of Cambridge, UK)
Mendelian randomization: its potential and limitations
16.3 Plenary 1 Wednesday, 10:40am ZHG011

Adalbert Wilhelm (Jacobs Uni, DE)
Data-Driven Classification in the Social Sciences
17.3 Plenary 2 Thursday, 10:40am ZHG011

Hans Rudolf Künsch (ETH Zürich, CH)
Numerical weather prediction and statistics
18.4 Closing Friday, 12:00pm ZHG011

Invited Speakers

Rosemary Bailey (Uni St Andrews, UK)
Design of Dose-Escalation Trials: Research Spurred by a Trial That Went Wrong
15.5.3 Tuesday 2.50pm ZHG009

Andreas Buja (Uni Pennsylvania, USA)
Combining Data Visualization and Analytics — Examples and Problems
18.2.9 Friday, 8:50am ZHG009

Ying Cheng (Uni Notre Dame, USA)
Computerized Adaptive Testing: The History, Development and New Directions
16.5.2 Wednesday, 2:50pm ZHG102

Gerda Claeskens (KU Leuven, BE)
Confidence intervals post-model selection and other topics in model averaging
16.4.4 Wednesday, 1:00pm ZHG009

Sandrine Dudoit (Uni California, Berkeley, USA)
Identification of Novel Cell Types in the Brain Using Single-Cell Transcriptome Sequencing
17.2.8 Thursday, 8:50am ZHG102

Peter Goos (KU Leuven, Uni Antwerpen, BE)
Optimal design of mixture experiments
15.6.1 Tuesday, 5:40pm ZHG102

Patrik Guggenberger (Pennsylvania State Uni, USA)
Identification- and Singularity- Robust Inference for Moment Condition Models
18.3.2 Friday, 10:40am ZHG101

Marc Hallin (Uni libre de Bruxelles, BE)
Monge-Kantorovitch Quantiles, Ranks, and Signs
17.4.7 Thursday, 1:20pm ZHG101

Larry Hedges (Northwestern Uni, USA)
Recent Developments in Multivariate Meta-analysis
15.2.5 Tuesday, 8:50am ZHG007

Georg Heinze & Daniela Dunkler (Medical Uni of Vienna, AT)
Variablen Selektion
17.4.1 Thursday, 1:00pm ZHG009
17.5.1 Thursday, 2:50pm ZHG009

Robin Henderson (Newcastle Uni, UK)
Longitudinal perspectives on event history analysis
16.2.10 Wednesday, 8:50am ZHG009

Joop Hox (Uni Utrecht, NL)
Common problems and some solutions in the analysis of cross-national surveys
15.4.2 Tuesday, 1:00pm ZHG102

Beat Hulliger (FH Nordwestschweiz, CH)
Monitoring statistical data preparation
15.5.5 Tuesday, 2:50pm ZHG104

Thomas Lengauer (MPI für Informatik, DE)
Custom-tailoring combination drug therapies with bioinformatics
18.3.1 Friday, 10:40am ZHG009

David Lovell (Uni London, UK)
Statistics and mutagenicity/genotoxicity testing: past and future challenges
15.6.3 Tuesday, 4:40pm ZHG009

Marloes Maathuis (ETH Zürich, CH)
A complete adjustment criterion for the computation of causal effects
17.5.4 Thursday, 2:50pm ZHG101

Masahiro Mizuta (Hokkaido Uni, JP)
Symbolic data analysis for post-big data
15.5.2 Tuesday, 2:50pm ZHG101

Byron Morgan (Uni Kent, UK)
Integrated population modelling
15.4.5 Tuesday, 1:00pm ZHG009

Morten Ørregaard Nielsen (Queen's Uni, CA)
The cointegrated vector autoregressive model with general deterministic terms
15.2.9 Tuesday, 8:50am ZHG104

Edzer Pebesma (Uni Münster, DE)
Support of observations and predictions in spatial and temporal statistics: practical
aspects and software challenges
17.2.2 Tuesday, 8:50am ZHG009

Jose M. Pena (Uni Politécnica de Madrid, ES)
Data Analysis Challenges in Neuroscience: From Experimental Data to Brain Simulation
17.2.4 Tuesday, 8:50am ZHG104

Lawrence Phillips (London School of Economics and Political Science, UK)
Creating the future: moving benefit-risk decisions from implicit and qualitative to
explicit and quantitative
16.2.5 Wednesday, 8:50am ZHG102

Bertram Raum (BfDI, DE)
Forschungsethik und Datenschutz in Zeiten von Big Data
17.2.3 Tuesday, 8:50am ZHG101

Yves Rosseel (Ghent Uni, BE)
Lavaan and the (computational) history of structural equation modeling
18.2.8 Friday, 8:50am ZHG101

Håvard Rue (Norwegian Uni of Science and Technology, NO)
Sensitivity of model assumptions for latent Gaussian models
16.2.6 Wednesday, 8:50am ZHG101

Olivier Scaillet (Uni of Geneva and Swiss Finance Institute, CH)
A diagnostic criterion for approximate factor structure
16.4.9 Wednesday, 1:00pm ZHG101

Max Welling (Uni Amsterdam)
Bayesian inference in deep architectures
15.5.1 Tuesday, 2:50pm ZHG102

Information for Presentation

Instructions to presenting authors

Please introduce yourself to the chair of your session 15 minutes before the session starts. Bring your presentation slides on a USB drive and copy them onto the computer provided in the room where your session takes place. Organizing team members (red t-shirts) will be available for technical support.

Make sure your presentation is in PDF format and that all fonts are embedded. Users of presentation programs such as Microsoft Powerpoint are kindly requested to export their slides to PDF.

DAGStat conferences are international conferences. Conference languages are English and German. We welcome oral contributions in both English and German. Participants who choose to speak in German are encouraged to prepare their slides in English. We also encourage that posters are prepared in English. As a rule, oral presentations are expected to be delivered in the language of their abstracts.

Due to organizational issues, there is a strict time limit of 20 minutes including discussion for each contributed presentation.

Poster

Posters will be displayed on the ground floor of the ZHG on three different spots (Poster numbers 1-25, 26-50, 51-76). Please put up you poster on Wednesday, March 16, before 4.30 pm. Your poster IDs can be found in the programme booklet as well as on the poster boards. Pins to fix your poster will be provided at each poster board. Deadline for the removal of posters is Thursday, March 17, 6 pm. The conference organizers are not responsible for posters not collected by the end of the conference. During the poster session on Wednesday, March 16, 6:15 - 8:00, you are kindly requested to stand next to your poster and be available for questions. We encourage you to include a small picture of yourself on your poster.

Poster & GfKl Reception

To celebrate the 40th Annual Meeting of the Gesellschaft für Klassifikation (Society for Classification), the poster session is combined with a reception including drinks and snacks.

The event is planned as an informal gathering and will take place on Wednesday, March 16, at 6 pm at the "Foyer Zentrales Hörsaalgebäude" (ZHG), ground floor.

Panel Discussion

In addition to the regular sessions, DAGStat is hosting an exciting panel discussion featuring experts in publishing in statistical journals. The event is moderated by Karl Mosler, Professor of Statistics and Econometrics, University of Cologne, and panelists will discuss topics related to open access of scientific journals and data repositories, reproducibility of research, the role of scholarly societies, university libraries and commercial publishers, refereeing of contents, and building reputation for authors and journals.

Panelists:

Tim Friede,
Professor of Biostatistics at the University Medical Center Göttingen, Co-founder of the Systematic Review Unit, former Editor-in-Chief Biometrical Journal

Clemens Heine,
Senior Editor of Applied Mathematics and Computer Sciences at Birkhäuser-Science, Springer-Verlag, Basel

Wolfram Horstmann,
Director of the State and University Library of Lower Saxony, Confederation of Open Access Repositories (COAR), Research Data Alliance (RDA)

Yarema Okhrin,
Professor of Statistics, Universität Augsburg, Editor-in-Chief Advances in Statistical Analysis (AStA)

Martin Rasmussen,
Managing Director of "Copernicus" Meetings and Open Access Publications, Co-founder of the Open Access Scholarly Publisher Association (OASPA)

Education for Statistics in Practice

Time: Thursday, March 17, 1:00pm – 4:10pm
Location: ZHG, 009

For many years, the members of the German Region of the Biometric Society have been actively developing and implementing novel statistical methods. Developing and promoting these methods are inherently connected with continuing education of researchers at all stages of their career. Although the society regularly presents methodological developments at the annual meeting, a series of lectures called "Education for Statistics in Practice" was launched to further strengthen the society's educational work. This series is aimed at researchers interested in the application of sophisticated statistical techniques to real-world data and in the issues that arise when putting state of the art techniques and software into practice.

This year's lecture will be given by Georg Heinze and Daniela Dunkler (both Medical University of Vienna) and is titled: "Variable selection for statistical models: a review and recommendations for the practicing statistician"

Abstract: In this lecture, we will review variable selection methods for regression problems as often applied in analyses of observational studies with continuous, binary and censored survival endpoints. Variable selection methods are widely implemented in many statistical software packages, like SAS, R and SPSS. They are often based on information criteria, significance, change-of-estimate or penalized likelihood. We will discuss implications of variable selection, e.g., on uncertainty and stability of the final model, on bias of regression coefficients, and on the validity of confidence intervals. While many scientists have argued against data-driven variable selection, we will give pragmatic recommendations for the practitioner, suggesting typical steps to be done when variable selection has to be conducted, from selection of candidate covariates based on background knowledge, over choosing an appropriate variable selection method to presenting the final model in scientific reports. These recommendations will consider the case of moderately correlated covariates $(r < 0.8)$ of mixed type. We will further make a brief outlook on methodological extensions to deal with missing values, nonlinear effects and effect modification.

„Lehrertag" (for German school teachers only)

Time: Tuesday, March 15, 2:30pm – 5:45pm
Location: ZHG, 001

In consequence of an increasing importance of statistics in politics and society, principles such as probability, randomness, and risk have been integrated into Math classes of all schools in Lower Saxony.

The „Lehrertag" (Teacher's day) is dedicated to the question of how these principles can be intelligibly prepared and taught in class. Topics such as data analysis, application, and software will be discussed as well as issues in descriptive and exploratory statistics, and probability theory.

To interact with teachers from different school levels, core themes such as data and chance will be addressed in an introductory lecture followed by parallel practical session in which issues of the lecture will be discussed using examples relevant for teaching in school.

2:30pm – 3:40pm Begrüßung, Vortrag

Big Data - Big Brother oder Big Chances? „Ja, wie für mich gemacht!", Targeting (zielgruppenorientierte Einblenden von Werbung auf Webseiten) im interaktiven Marketing
Prof. Dr. Ralf Wagner (Kassel)
Location: ZHG, 001

4:00pm – 5:45pm Begrüßung, Workshops

Unerwartete Eigenschaften der stochastischen (Un-)Abhängigkeit
Dr. Jörg Meyer (Hameln)
Location: Verfügungsgebäude, VG1.101

Ein roter Faden durch die Stochastik in der Sek II. Von Stichprobenverteilungen, Binomial-und Normalverteilungen und Prognose- und Konfidenzintervallen
Reimund Vehling (Hannover)
Location: Verfügungsgebäude, VG1.102

Stochastik lernen mit Papierfröschen
Prof. Dr. Markus Vogel (Heidelberg)
Location: Verfügungsgebäude, VG1.103

Mit Daten sicher durch den Zufall in der Sekundarstufe I
Prof. Dr. Andreas Eichler (Kassel)
Location: Verfügungsgebäude, VG1.104

Young Statisticians

Time: Tuesday, March 15, 1:00pm – 2:20pm
Location: ZHG, 104

The DAGStat invited young researchers to submit papers and to apply for the opportunity to present their research during a dedicated session at the DAGStat conference. Students at the end of their bachelor's or master's thesis or post-graduate students in their first year were invited to apply. The Young Statisticians session can be seen as a prestigious rehearsal since successful candidates have an excellent opportunity to get valuable feedback on their presentations regarding performance, content, and layout. Additionally, Young Statisticians will be invited to attend the whole conference including conference dinner and receive a certificate.

Statistics for the Public (in German)

Time: Monday, March 14, 8:00pm – 10:00pm
Location: Paulinerkirche

Availability of data on media usage and consumption behavior can be considered both a blessing and a curse for customers but also for companies. The precise targeting is clearly an advantage as consumers are approached according to their preferences of products and services. On the downside, transparency is creeping in our privacy revealing intimate details of our lifestyles. Moreover, the new quality of data and information in terms of granularity and frequency changes competition between rival suppliers as well as between advertising budgets of competing media channels.

Speaker: Ralf Wagner is endowed professor (SVI) of international direct marketing at the Dialog Marketing Competence Center at the University of Kassel. His research focuses on intercultural communication, interactive marketing, and targeting of clients in databases and digital media.

Statistics Bazaar

Time: Tuesday - Friday, 8 am
Location: ZHG, 009

The DAGStat conference provides a unique opportunity for statisticians to exchange ideas with colleagues from other areas of application. In particular the statistics bazaar is meant to encourage statisticians to look beyond the toolbox that is commonly used in their own area. Sometimes the ideas of colleagues remain unnoticed by oneself simply because they are communicated in an unfamiliar context. In the statistics bazaar four distinguished colleagues with different backgrounds will explain some of the subject matter challenges they are confronted with, boil it down to their statistical content, and explain - from statistician to statistician - how these problems can be tackled.

Tuesday, March 15

Permutationstests in faktoriellen Designs
Markus Pauly

Wednesday, March 16

Strukturelle Vektorautoregression
Helmut Herwartz

Thursday, March 17

Alarm! Statistical methods for the online monitoring of count data
Michael Höhle

Friday, March 18

Analysis of clinical cohort data using nested case-control and case-cohort sampling designs: A powerful and economical tool
Kristin Ohneberg

Schedule

Date: Monday, 14th March 2016

Time				
9:00am – 5:00pm	**Tutorial 1: Event Data Analysis** Location: VG, 1.103	**Tutorial 2: Copulae in Practice** Location: VG, 1.104	**Tutorial 3: Evidence Synthesis** Location: VG, 1.102	**Tutorial 4: Introduction to Integer-Valued Time Series** Location: VG, 1.101
3:00pm – 6:00pm	**Registration** Location: ZHG, 1st Floor			
8:00pm – 10:00pm	**Statistics for the Public** Location: Paulinerkirche Chair: Ralf Wagner			

Date: Tuesday, 15th March 2016

8:00am – 8:30am

15.1.SB: Statistical Bazaar, Permutationstests in faktoriellen Designs
Location: ZHG, 101
Chair: Markus Pauly

8:50am – 10:10am

15.2.1: Big Data and Data Science	15.2.2: Cluster Analysis and Classification - Classification applied	15.2.3: Official Statistics and Survey Statistics	15.2.4: Penalized and Regularized Regression Analysis	15.2.5: Research Synthesis and Meta Analysis - invited speaker
Location: ZHG, 105	Location: ZHG, 006	Location: ZHG, 005	Location: ZHG, 003	Location: ZHG, 007
Chair: Iris Pigeot, Eyke Hüllermeier	Chair: Claus Weihs	Chair: Hans Kiesl	Chair: Andreas Mayr	Chair: Heinz Holling

15.2.6: Statistics in Agriculture and Ecology - Field Experiments and Longitudinal Data in Agriculture and Ecology	15.2.7: Survival and Event History Analysis	15.2.8: Statistik Lehren an Schule und Universität - p-Werte	15.2.9: Time Series Analysis - invited speaker	
Location: ZHG, 102	Location: ZHG, 101	Location: ZHG, 004	Location: ZHG, 104	
Chair: Hans-Peter Piepho	Chair: Jan Beyersmann	Chair: Hubert Merkel, Jochen Kruppa	Chair: Philipp Sibbertsen	

10:10am – 10:40am

Coffee break

10:40am – 12:00pm

15.3: Opening
Location: ZHG, 011
Chair: Christine H. Müller

12:00pm

Lunch break

1:00pm

15.AG.1: AG Lehre	15.AG.2: AG Nachwuchs	15.AG.3: AG Datenanalyse und Numerische Klassifikation	15.AG.4: AG Landwirtschaftliches Versuchwesen	15.AG.5: AG Statistische Methoden in der Medizin/ AG Epidemiologische Methoden in der Medizin
Location: ZHG, 004	Location: ZHG, 011	Location: ZHG, 006	Location: ZHG, 102	Location: ZHG, 101

Date: Tuesday, 15th March 2016

Time					
1:00pm – 2:20pm	**15.4.1: Data Analysis and Marketing** Location: ZHG, 006 Chair: Yasemin Boztug, Daniel Baier	**15.4.2: Multi Level and Panel Data Analysis - invited speaker** Location: ZHG, 102 Chair: Hans-Jürgen Andreß, Kilian Seng	**15.4.3: Official Statistics and Survey Statistics** Location: ZHG, 005 Chair: Peter Schmidt	**15.4.4: Research Synthesis and Meta Analysis** Location: ZHG, 007 Chair: Ralf Bender	**15.4.5: Statistics in Agriculture and Ecology - Ecological and Environmental Statistics** Location: ZHG, 009 Chair: Roland Langrock
	15.4.6: Statistics of High Dimensional Data Location: ZHG, 105 Chair: Taras Bodnar, Tim Beißbarth	**15.4.7: Survival and Event History Analysis** Location: ZHG, 101 Chair: Christine Eulenburg	**15.4.8: Statistik Lehren an Schule und Universität - Übungen** Location: ZHG, 004 Chair: Geraldine Rauch, Reinhard Vonthein	**15.4.9: Time Series Analysis** Location: ZHG, 003 Chair: Christina Stöhr	**15.4.10: Young Statisticians** Location: ZHG, 104 Chair: Anke Hüls, Benjamin Hofner
2:20pm – 2:50pm	**Coffee break**				
2:50pm – 4:10pm	**15.5.1: Big Data and Data Science** Location: ZHG, 102 Chair: Iris Pigeot, Eyke Hüllermeier	**15.5.2: Cluster Analysis and Classification - Classification** Location: ZHG, 101 Chair: Hans-Joachim Mucha	**15.5.3: Design of Experiments** Location: ZHG, 009 Chair: Norbert Benda	**15.5.4: Multi Level and Panel Data Analysis** Location: ZHG, 005 Chair: Hans-Jürgen Andreß, Kilian Seng	**15.5.5: Official Statistics and Survey Statistics** Location: ZHG, 104 Chair: Peter Schmidt
	15.5.6: Research Synthesis and Meta Analysis Location: ZHG, 007 Chair: Heinz Holling	**15.5.7: Small Area Analysis and Spatial Statistics** Location: ZHG, 003 Chair: Susanne Schnorr-Bäcker, Volker Schmid	**15.5.8: Survival and Event History Analysis** Location: ZHG, 006 Chair: Martin Wolkewitz	**15.5.9: Statistik Lehren an Schule und Universität - Fortgeschrittene Anwender** Location: ZHG, 004 Chair: Mario Hasler, Theodor Framke	**15.5.10: Time Series Analysis** Location: ZHG, 105 Chair: Christian Leschinski

Date: Tuesday, 15th March 2016

4:10pm - 4:40pm	Coffee break, Presentation of the DAGStat Societies		
4:40pm - 6:00pm	**15.6.1: Design of Experiments** Location: ZHG, 102 Chair: Rosemary Bailey	**15.6.2: Mathematical Statistics in Life Science** Location: ZHG, 104 Chair: Arnold Janssen	**15.6.3: Statistics in Clinical and Preclinical Research - Preclinical** Location: ZHG, 006 Chair: Meinhard Kieser, Richardus Vonk	**15.6.GFKL: Mitgliederversammlung Gesellschaft für Klassifikation** Location: ZHG, 101

Date: Wednesday, 16th March 2016

Time	Sessions
8:00am – 8:30am	**16.1.SB: Statistical Bazaar - Strukturelle Vektorautoregression** Location: ZHG, 101 Chair: Helmut Herwartz
8:50am – 10:10am	**16.2.1: Bioinformatics-Expression data I** Location: ZHG, 003 Chair: Harald Binder — **16.2.6: Penalized and Regularized Regression Analysis** Location: ZHG, 101 Chair: Thomas Kneib
	16.2.2: Cluster Analysis and Classification - Clustering applied Location: ZHG, 004 Chair: Claus Weihs — **16.2.7: Psychometrics - Item Response Theory** Location: ZHG, 005 Chair: Carolin Strobl
	16.2.3: Design of Experiments Location: ZHG, 007 Chair: Marc Vandemeulebroecke — **16.2.8: Statistics in Clinical and Preclinical Research - Miscellanous** Location: ZHG, 104 Chair: Meinhard Kieser, Richardus Vonk
	16.2.4: Mathematical Statistics in Life Science Location: ZHG, 105 Chair: Arne C. Bathke — **16.2.9: Statistics in Finance** Location: ZHG, 006 Chair: Fabian Spanhel
	16.2.5: Methods for Risk and Benefit Assessment Location: ZHG, 102 Chair: Jürgen Kübler, Angelika May — **16.2.10: Survival and Event History Analysis** Location: ZHG, 009 Chair: Steffen Unkel
10:10am – 10:40am	**Coffee break**
10:40am – 12:00pm	**16.3: Plenary 1** Location: ZHG, 011 Chair: Tim Friede
12:00pm	**Lunch break**
12:00pm – 1:00pm	**16.AG.1: AG Bayes Methodik** Location: ZHG, 101
	16.AG.2: AG Statistische Methoden in der Epidemiologie Location: ZHG, 104
	16.AG.3: AG Populationsgenetik und Genomanalyse/ AK Genetische Epidemiologie/ AK Humangenetik der GMDS Location: ZHG, 102
	16.AG.4: AG Biostatistik Location: ZHG, 105
	16.AG.5: AG Nichtparametrische Methoden Location: ZHG, 006

Date: Wednesday, 16th March 2016

Time					
1:00pm - 2:20pm	**16.4.1: Bioinformatics- Expression data II** Location: ZHG, 003 Chair: Martin Schäfer	**16.4.2: Cluster Analysis and Classification - Clustering** Location: ZHG, 004 Chair: Hans-Hermann Bock	**16.4.3: Design of Experiments** Location: ZHG, 007 Chair: Ralf-Dieter Hilgers	**16.4.4: Mathematical Statistics in Life Science** Location: ZHG, 009 Chair: Markus Pauly	**16.4.5: Penalized and Regularized Regression Analysis** Location: ZHG, 105 Chair: Andreas Groll
	16.4.6: Psychometrics - invited talk Location: ZHG, 005 Chair: Andreas Frey	**16.4.7: Robust and Nonparametric Statistics - Zeitreihen** Location: ZHG, 006 Chair: Anne Leucht	**16.4.8: Statistics in Clinical and Preclinical Research - PreClinical / Small Samples** Location: ZHG, 104 Chair: Meinhard Kieser, Richardus Vonk	**16.4.9: Statistics in Finance** Location: ZHG, 101 Chair: Yarema Okhrin	**16.4.10: Survival and Event History Analysis** Location: ZHG, 102 Chair: Christian Röver
2:20pm - 2:50pm	**Coffee break**				
2:50pm - 4:10pm	**16.5: Award Session (GfKL und IBS-DR)** Location: ZHG, 009 Chair: Tim Friede, Berthold Lausen	**16.5.1: Observational Studies– Lessons Learned (?)** Location: ZHG, 104 Chair: Ralph Brinks, Irene Schmidtmann	**16.5.2: Psychometrics - Statistical Foundations of Psychometrics** Location: ZHG, 102 Chair: Rolf Steyer	**16.5.3: Statistics in Finance** Location: ZHG, 101 Chair: Holger Fink	
4:10pm - 4:40pm	**Coffee break**				

Date: Wednesday, 16th March 2016

4:40pm – 6:00pm	**16.6.1: Panel Discussion - The Future of Science Publishing** Location: ZHG, 010 Chair: Karl Mosler	**16.6.2: Observational Studies - Statistical Methods in Practice** Location: ZHG, 104 Chair: Sigrid Behr, Anne Lotz	**16.6.3: Psychometrics - Assessment Methods and Applications** Location: ZHG, 102 Chair: Klaus D. Kubinger	**16.6.4: Statistics in Finance** Location: ZHG, 101 Chair: Vasyl Golosnoy
6:00pm – 10:00pm	**16.7 Poster: Poster Session** Location: ZHG, Foyer		**16.7.AG.1: AG Leiter Treffen** Location: ZHG, 105	

Date: Thursday, 17th March 2016

Time	Sessions
8:00am – 8:30am	**17.1.SB: Statistical Bazaar - Alarm! Statistical methods for the online monitoring of count data** Location: ZHG, 101 Chair: Michael Höhle
8:50am – 10:10am	**17.2.1: Bioinformatics- Data integration I** Location: ZHG, 005 Chair: Hans A. Kestler · **17.2.2: Computational Statistics and Statistical Software - Spatial and Spatio-Temporal Analysis** Location: ZHG, 009 Chair: Achim Zeileis, Matthias Schmid · **17.2.3: Destroying data as a means of data protection – is it ethical?** Location: ZHG, 101 Chair: Iris Pigeot, Ronja Foraita · **17.2.4: Machine learning - Machine Learning for Big Data** Location: ZHG, 104 Chair: Myra Spiliopoulou · **17.2.5: Mathematical Statistics in Life Science** Location: ZHG, 006 Chair: Edgar Brunner · **17.2.6: Robust and Nonparametric Statistics - Multivariate** Location: ZHG, 003 Chair: Claudia Becker · **17.2.7: Statistics in Clinical and Preclinical Research - Adaptive** Location: ZHG, 007 Chair: Meinhard Kieser, Richardus Vonk · **17.2.8: Statistics of High Dimensional Data** Location: ZHG, 102 Chair: Waltraud Kahle · **17.2.9: Survival and Event History Analysis** Location: ZHG, 105 Chair: Waltraud Kahle · **17.2.10: Time Series Analysis** Location: ZHG, 004 Chair: Silke Weber
10:10am – 10:40am	Coffee break, Presentation of the DAGStat Societies
10:40am – 12:00pm	**17.3: Plenary 2** Location: ZHG, 011 Chair: Berthold Lausen
12:00pm	Lunch break
12:00pm – 1:00pm	**17.AG.1: AG Ethik** Location: ZHG, 101 · **17.AG.2: Editorial Board Biometrical Journal** Location: ZHG, 102

Date: Thursday, 17th March 2016

1:00pm – 2:20pm	**17.4.1: Education for Statistics in Practice** Location: ZHG, 009 Chair: Stephanie Roll, Christoph Muysers	**17.4.2: Bioinformatics-Data integration II** Location: ZHG, 005 Chair: Jörg Rahnenführer	**17.4.3: Computational Statistics and Statistical Software – Computational Statistical Modeling** Location: ZHG, 105 Chair: Achim Zeileis, Matthias Schmid	**17.4.4: Design of Experiments** Location: ZHG, 104 Chair: Ralf-Dieter Hilgers	**17.4.5: Machine learning – Advanced Supervised Learning Tasks** Location: ZHG, 003 Chair: Berthold Lausen
	17.4.6: Mathematical Statistics in Life Science Location: ZHG, 006 Chair: Solomon Woldemariam Harrar	**17.4.7: Robust and Nonparametric Statistics – invited** Location: ZHG, 101 Chair: Roland Fried	**17.4.8: Statistics in Clinical and Preclinical Research – Adaptive Enrichment** Location: ZHG, 007 Chair: Meinhard Kieser, Richardus Vonk	**17.4.9: Survival and Event History Analysis** Location: ZHG, 102 Chair: Maria Kateri	**17.4.10: Time Series Analysis** Location: ZHG, 004 Chair: Kerstin Reckrühm
2:20pm – 2:50pm	**Coffee break**				
2:50pm – 4:10pm	**17.5.1: Education for Statistics in Practice** Location: ZHG, 009 Chair: Stephanie Roll, Christoph Muysers	**17.5.2: Computational Statistics and Statistical Software – Statistical Software in R** Location: ZHG, 105 Chair: Achim Zeileis, Matthias Schmid	**17.5.3: Design of Experiments** Location: ZHG, 104 Chair: Werner G. Müller	**17.5.4: Graphical Models and Causal Inference** Location: ZHG, 101 Chair: Andreas Geyer-Schulz	**17.5.5: Machine learning – Tuning and Estimations** Location: ZHG, 003 Chair: Jerzy Stefanowski
	17.5.6: Statistics in Clinical and Preclinical Research – Targeted Therapies Location: ZHG, 007 Chair: Meinhard Kieser, Richardus Vonk	**17.5.7: Statistics in Natural Sciences and Technology** Location: ZHG, 006 Chair: Sonja Kuhnt	**17.5.8: Survival and Event History Analysis** Location: ZHG, 102 Chair: Udo Kamps		

Date: Thursday, 17th March 2016

	17.6.IBS-DR: Mitgliederversammlung	17.6.2: Machine learning - Advanced Applications of Machine Learning	17.6.3: Statistics in Natural Sciences and Technology
4:40pm - 6:00pm	Location: ZHG, 009	Location: ZHG, 101 Chair: Ralph Brinks, José M. Pena	Location: ZHG, 102 Chair: Dirk Surmann

Date: Friday, 18th March 2016

8:00am **-** **8:30am**	**18.1.SB: Statistical Bazaar - Analysis of clinical cohort data using nested case-control and case-cohort sampling designs: A powerful and economical tool** Location: ZHG, 101 Chair: Kristin Ohneberg				
8:50am **-** **10:10am**	**18.2.1: Bioinformatics-Networks and Proteomics** Location: ZHG, 004 Chair: Manuela Zucknick	**18.2.2: Empirical Economics and Applied Econometrics** Location: ZHG, 003 Chair: Axel Werwatz	**18.2.3: Penalized and Regularized Regression Analysis** Location: ZHG, 007 Chair: Georg Heinze	**18.2.4: Robust and Nonparametric Statistics - Regression** Location: ZHG, 105 Chair: Claudia Becker	**18.2.5: Statistics in Agriculture and Ecology - Animal Breeding and Statistical Genetics** Location: ZHG, 006 Chair: Norbert Reinsch
	18.2.6: Statistics in Clinical and Preclinical Research - Diagnostics Location: ZHG, 104 Chair: Meinhard Kieser, Richardus Vonk	**18.2.7: Statistics in Natural Sciences and Technology** Location: ZHG, 102 Chair: Christian H. Weiß	**18.2.8: Structural Equation Modelling** Location: ZHG, 101 Chair: Rolf Steyer, Helmut Herwartz	**18.2.9: Visualisation and Exploratory Data Analysis** Location: ZHG, 009 Chair: Christian Hennig	
10:10am **-** **10:40am**	**Coffee break**				

Date: Friday, 18th March 2016

10:40am – 12:00pm	**18.3.1: Bioinformatics - invited** Location: ZHG, 009 Chair: Jörg Rahnenführer, Hans A. Kestler	**18.3.2: Empirical Economics and Applied Econometrics** Location: ZHG, 101 Chair: Helmut Farbmacher	**18.3.3: Open Topics** Location: ZHG, 003 Chair: Fabian Sobotka	**18.3.4: Penalized and Regularized Regression Analysis** Location: ZHG, 007 Chair: Elisabeth Waldmann	**18.3.5: Robust and Nonparametric Statistics - Strukturbruch** Location: ZHG, 105 Chair: Hajo Holzmann
	18.3.6: Statistics in Agriculture and Ecology - Animal Breeding and Agricultural Economics Location: ZHG, 006 Chair: Roland Langrock	**18.3.7: Statistics in Clinical and Preclinical Research - Phase I / Multi-arm Trials** Location: ZHG, 104 Chair: Meinhard Kieser, Richardus Vonk	**18.3.8: Statistics in Natural Sciences and Technology** Location: ZHG, 102 Chair: Sven Knoth	**18.3.9: Structural Equation Modelling** Location: ZHG, 004 Chair: Rolf Steyer, Helmut Herwartz	**18.3.10: Visualisation and Exploratory Data Analysis** Location: ZHG, 005 Chair: Willi Sauerbrei
12:00pm – 1:00pm	**18.4: Closing** Location: ZHG, 011 Chair: Thomas Kneib				

Session Overview

Tuesday, March 15th, 8:50 – 10:10

15.2.1 Big Data and Data Science

Date: Tuesday, March 15th, 8:50 – 10:10   *Location:* ZHG105
Chair: Iris Pigeot and Eyke Hüllermeier

08:50 – 09:10	Prediction-Induced Drift as New Form of Drift *Anita Hrubos, David Bodnar, **Georg Krempl**, Myra Spiliopoulou*
09:10 – 09:30	Mining consumer-generated product-configuration data *Robin Rüde, Tino Fuhrmann, Thomas Neureuther, Leonard Lausen,* ***Marvin Schweizer**, Andreas Geyer-Schulz*
09:30 – 09:50	Quantifying the quality of text selection in large media corpora ***Lars Koppers**, Gerret von Nordheim, Karin Boczek, Henrik Müller, Jörg* *Rahnenführer*
09:50 – 10:10	Analyzing log data in the social sciences: Methods for test development and research of strategy use. ***Florian Kopp***

15.2.2 Cluster Analysis and Classification - Classification applied

Date: Tuesday, March 15th, 8:50 – 10:10   *Location:* ZHG006
Chair: Claus Weihs

08:50 – 09:10	Application of Random Forest Analysis to Characterize Hearing Performance ***Maike Tahden**, Anja Gieseler, Hans Colonius*
09:10 – 09:30	Multilabel-Classification for predicting broken Parts of Medical Devices with Machine-Learning R package mlr (Master Thesis) ***Philipp Probst***
09:30 – 09:50	Benefits of using Longitudinal Data in Discriminant Analysis ***Riham Awad El Saeiti**, Gabriela Czanner, David Hughes, Marta García-* *Fiñana*
09:50 – 10:10	Unequal Priors in Linear Discriminant Analysis ***Carmen van Meegen**, Sarah Schnackenberg, Uwe Ligges*

15.2.3 Official Statistics and Survey Statistics

Date: Tuesday, March 15th, 8:50 – 10:10   *Location:* ZHG005
Chair: Hans Kiesl

08:50 – 09:10	Occupation Coding during the Interview **Malte Schierholz**
09:10 – 09:30	Detecting outliers in weighted univariate survey data **Anna Pauliina Sandqvist**
09:30 – 09:50	Measuring geographical information of web survey respondents **Barbara Felderer**, *Annelies Blom*
09:50 – 10:10	Assessing and Explaining Strategic Voting with Survey Data: A Finite Mixture Discrete Choice Model **Martin Elff**

15.2.4 Penalized and Regularized Regression Analysis

Date: Tuesday, March 15th, 8:50 – 10:10   *Location:* ZHG003
Chair: Andreas Mayr

08:50 – 09:10	Regularization methods in statistical modelling - A comparison between gradient boosting and the lasso **Tobias Hepp**, *Andreas Mayr, Matthias Schmid*
09:10 – 09:30	Regularized censored regression with conditional heteroskedasticity **Jakob W. Messner**, *Achim Zeileis*
09:30 – 09:50	A General Framework for the Selection of Effect Type in Ordinal Regression **Wolfgang Pößnecker**, *Gerhard Tutz*
09:50 – 10:10	On variable selection and shrinkage strategies to derive multivariable regression models **Willi Sauerbrei**, *Hans Van Houwelingen*

15.2.5 Research Synthesis and Meta Analysis

Date: Tuesday, March 15th, 8:50 – 10:10   *Location:* ZHG007
Chair: Heinz Holling

08:50 – 09:50	Recent Developments in Multivariate Meta-analysis **Larry Hedges**
09:50 – 10:10	Generalised evidence synthesis for clinical trials in small patient populations **Steffen Unkel**, *Christian Röver, Tim Friede*

15.2.6 Statistics in Agriculture and Ecology - Field Experiments and Longitudinal Data in Agriculture and Ecology

Date: Tuesday, March 15th, 8:50 – 10:10   *Location:* ZHG102
Chair: Hans-Peter Piepho

08:50 – 09:10	Generalized confidence intervals for variation in agricultural field experiments **Johannes Forkman**
09:10 – 09:30	Plant-pollinator networks in urban landscapes **Hannah Reininghaus**, *Kristy Udy*
09:30 – 09:50	Bootstrap confidence intervals to quantify uncertainty on the sediment balance of irrigated rice fields **Johanna Slaets**, *Georg Cadisch, Hans-Peter Piepho*
09:50 – 10:10	Analysis of longitudinal veterinary antibiotic consumption data – experiences with generalized linear mixed models in large data sets using SAS **Inga Ruddat**, *Franziska Lieke, Maria Hartmann, Lothar Kreienbrock*

15.2.7 Survival and Event History Analysis

Date: Tuesday, March 15th, 8:50 – 10:10   *Location:* ZHG101
Chair: Jan Beyersmann

08:50 – 09:10	Optimal Imperfect Maintenance in a Multi-State System with Two Failure Types **Waltraud Kahle**, *Stephanie Dietrich*
09:10 – 09:30	Multistate models versus combined endpoint analysis in a randomized clinical trial of adaptive servo-ventilation in heart failure patients **Christine Eulenburg**, *Martin R. Cowie, Holger Woehrle, Helmut Teschler, Eik Vettorazzi, Anika Buchholz, Susanne Lezius, Karl Wegscheider*
09:30 – 09:50	Dynamic prediction approach to analyse attributable mortality of hospital acquired infections **Maja Katharina von Cube**, *Martin Schumacher, Martin Wolkewitz*
09:50 – 10:10	The Effect of Class, Year and Age on Sojourn in a Credit Rating Class: A Likelihood Analysis **Rafael Weissbach**, *Yongdai Kim*

15.2.8 Statistik Lehren an Schule und Universität - p-Werte

Date: Tuesday, March 15th, 8:50 – 10:10   *Location:* ZHG004
Chair: Hubert Merkel and Jochen Kruppa

08:50 – 09:10	Wie führen Lehrbücher der Statistik den p-Wert ein? **Theodor Framke**
09:10 – 09:30	Kaminofen, Torlinientechnik und Tanz-Knigge: Gleichnisse für die Akteure eines statistischen Hypothesentests **Benjamin Mayer**
09:30 – 09:50	An Illustrative Analogy for the Comparison of Several Multiplicity Adjustment Methods **Mario Hasler**
09:50 – 10:10	Null hypothesis significance testing – what would Fisher say? **Cornelia Ursula Kunz**

15.2.9 Time Series Analysis - invited speaker

Date: Tuesday, March 15th, 8:50 – 10:10   *Location:* ZHG104
Chair: Philipp Sibbertsen

08:50 – 10:10	The cointegrated vector autoregressive model with general deterministic terms **Morten Ørregaard Nielsen**

Tuesday, March 15th, 10:40 – 12:00

15.3 Opening

Date: Tuesday, March 15th, 10:40 – 12:00   *Location:* ZHG011
Chair: Christine H. Müller

10:40 – 11:30	Detecting cellwise outliers **Peter Rousseeuw**

Tuesday, March 15th, 13:00 − 14:20

15.4.1 Data Analysis and Marketing

Date: Tuesday, March 15th, 13:00 − 14:20   *Location:* ZHG006
Chair: Yasemin Boztug

13:00 − 13:20	A Comparison of Semiparametric and Parametric SUR Models for Category Pricing **Winfried J. Steiner**, *Anett Weber, Stefan Lang*
13:20 − 13:40	Discrete Choice Models on Mobile Devices **Peter Kurz**
13:40 − 14:00	Kriterien für erfolgreiche Datenfusionen **Heiko Grönitz**, *Karlheinz Fleischer*
14:00 − 14:20	Components, Cluster and Correspondence: A data driven approach to consumer behaviour segmentation *Oliver A. Gansser,* **Karsten Lübke**

15.4.2 Multi Level and Panel Data Analysis

Date: Tuesday, March 15th, 13:00 − 14:20   *Location:* ZHG102
Chair: Hans-Jürgen Andreß and Kilian Seng

13:00 − 14:00	Common problems and some solutions in the analysis of cross-national surveys **Joop Hox**
14:00 − 14:20	Must We All Become Bayesians Now? Improvements to Frequentist Inference in Multilevel Analysis With a Small Number of Clusters **Martin Elff**, *Susumu Shikano*

15.4.3 Official Statistics and Survey Statistics

Date: Tuesday, March 15th, 13:00 − 14:20   *Location:* ZHG005
Chair: Peter Schmidt

13:00 − 13:20	Monitoring Subjective Well-Being: Some New Empirical Evidence for Germany **Erich Oltmanns**
13:20 − 13:40	A reassessment of quarterly national account estimates and revisions **Rolf Scheufele**, *Gabriel Zullig*
13:40 − 14:00	Amtliche Mikrodaten für die empirische Wirtschaftsforschung: Die AFiD-Produkte im FDZ − Möglichkeiten und Grenzen **Florian M. Köhler**, *Ramona Voshage*

14:00 – 14:20   Interviewer Effects in Panel Surveys: The Role of Interviewer-Respondent Familiarity and Panel Experience
Simon Kühne

15.4.4 Research Synthesis and Meta Analysis

Date: Tuesday, March 15th, 13:00 – 14:20   *Location:* ZHG007
Chair: Ralf Bender

13:00 – 13:20   Meta-analysis of full ROC curves based on bivariate time-to-event models for interval-censored data
Annika Hoyer, *Stefan Hirt, Oliver Kuß*

13:20 – 13:40   A novel Bayesian approach accounting for heterogeneous reference levels in dose-response meta-analyses
Gundula Behrens, *Michael F. Leitzmann*

13:40 – 14:00   Comparison of two approaches for Meta Analysis of individual patient data
Mariana Saskia Nold, *Peter Schlattmann*

14:00 – 14:20   Differential behavior of the Paule Mandel and the restricted maximum likelihood method for estimating heterogeneity in network meta-analysis when small studies are more heterogeneous than large studies
Jochem König, *Harald Binder*

15.4.5 Statistics in Agriculture and Ecology - Ecological and Environmental Statistics

Date: Tuesday, March 15th, 13:00 – 14:20   *Location:* ZHG009
Chair: Roland Langrock

13:00 – 13:40   Integrated population modelling
Byron Morgan

13:40 – 14:00   Realtime Classification of Fish in Underwater Sonar Videos
Ludwig Bothmann, *Michael Windmann, Göran Kauermann*

14:00 – 14:20   Impact of the introduction of Low Emission Zones in Munich and Berlin, Germany, on air pollution - A reliable analysis using adequate statistical models
Veronika Deffner, *Helmut Küchenhoff, Jianwei Gu, Annette Peters, Josef Cyrys*

15.4.6 Statistics of High Dimensional Data

Date: Tuesday, March 15th, 13:00 − 14:20   *Location:* ZHG105
Chair: Taras Bodnar and Tim Beißbarth

13:00 − 13:20	A Two-Step Approach to Bayesian Analysis of Sparse Factor Models **Markus Pape**
13:20 − 13:40	Estimation of Expected Utility Portfolios for Large Dimensional Data *Taras Bodnar, Yarema Okhrin,* **Nestor Parolya**
13:40 − 14:00	Comparison of methods for subgroup-specific survival analysis **Katrin Madjar**, *Jörg Rahnenführer*
14:00 − 14:20	The lowdown on very low p-values **Paul Eilers**

15.4.7 Survival and Event History Analysis

Date: Tuesday, March 15th, 13:00 − 14:20   *Location:* ZHG101
Chair: Christine Eulenburg

13:00 − 13:20	Estimating pregnancy outcome probabilities in the presence of dependent left-truncation **Alisa Anna-Maria Lüll**, *Jan Beyersmann, Arthur Allignol*
13:20 − 13:40	The cure-death model − A new approach for a randomised clinical trial design to increase efficiency of clinical endpoint evaluations **Harriet Sommer**, *Martin Wolkewitz, Martin Schumacher*
13:40 − 14:00	Bayesian Phase II Optimization for Time-To-Event Data Based on Historical Information **Anja Bertsche**, *Jan Beyersmann, Frank Fleischer, Gerhard Nehmiz*
14:00 − 14:20	A multi-state approach to unmask three common types of survival bias in a study about Tamiflu and mortality **Martin Wolkewitz**, *Martin Schumacher*

15.4.8 Statistik Lehren an Schule und Universität - Übungen

Date: Tuesday, March 15th, 13:00 − 14:20   *Location:* ZHG004
Chair: Geraldine Rauch and Reinhard Vonthein

13:00 − 13:20	Interdisciplinary Project in APPLIED SURVEY and ELECTORAL RESEARCH: The Munich Exit Poll Study **Helmut Küchenhoff**, *Paul Thurner, Andre Klima*
13:20 − 13:40	Nutzung von E-Quizzen und deren Einfluss auf den Lernerfolg in statistischen Großveranstaltungen **Manuel Förster**, *Constantin Weiser, Andreas Maur*

13:40 – 14:00   Blended Learning Tools for Large Statistics and Mathematics Courses
Achim Zeileis

14:00 – 14:20   Blended Learning - Statistik anwenden in den Agrawissenschaften
Karin Hartung

15.4.9 Time Series Analysis

Date: Tuesday, March 15th, 13:00 – 14:20   *Location:* ZHG003
Chair: Christina Stöhr

13:00 – 13:20   The detection of multiple structural breaks using MOSUM statistics based on estimating functions
Kerstin Reckrühm, *Claudia Kirch*

13:20 – 13:40   The Multiple Filter Test for the Detection of Parameter Changes in Point Processes
Michael Messer, *Stefan Albert, Julia Schiemann, Kauê M. Costa, Jochen Roeper, Gaby Schneider*

13:40 – 14:00   Empirical characteristic function-based estimation for locally stationary processes
Carina Beering, *Anne Leucht, Marco Meyer, Carsten Jentsch*

14:00 – 14:20   Robust Sequential Change-Point Procedures Based on U-Statistics
Christina Stöhr, *Claudia Kirch*

15.4.10 Young Statisticians

Date: Tuesday, March 15th, 13:00 – 14:20   *Location:* ZHG104
Chair: Anke Hüls and Benjamin Hofner

13:00 – 13:20   Analyzing adverse events by time-to-event models: The CLEOPATRA study as an example
Tanja Proctor, *Martin Schumacher*

13:20 – 13:40   Der Einfluss von Zentralitätsmaßen bei der netzwerkbasierten penalisierten Regression
Moritz Hanke

13:40 – 14:00   Analysing a recent study on childhood maltreatment by means of permutation tests for nonparametric factorial designs
Maria Umlauft, *Frank Konietschke, Katharina Schury, Iris-Tatjana Kolassa, Markus Pauly*

14:00 – 14:20   Inference for low- and highdimensional multi-group repeated measures designs with unequal covariance matrices
Martin Happ, *Solomon W. Harrar, Arne C. Bathke*

Tuesday, March 15th, 14:50 – 16:10

15.5.1 Big Data and Data Science

Date: Tuesday, March 15th, 14:50 – 16:10 *Location:* ZHG102
Chair: Iris Pigeot and Eyke Hüllermeier

14:50 – 15:30	Bayesian inference in deep architectures **Max Welling**, *Christos Louizos*
15:30 – 15:50	Random projections for Bayesian regression **Leo N. Geppert**, *Katja Ickstadt, Alexander Munteanu, Jens Quedenfeld, Christian Sohler*
15:50 – 16:10	Temporal Aspects in Stream Active Learning **Daniel Kottke**, *Georg Krempl, Myra Spiliopoulou*

15.5.2 Cluster Analysis and Classification - Classification

Date: Tuesday, March 15th, 14:50 – 16:10 *Location:* ZHG101
Chair: Hans-Joachim Mucha

14:50 – 15:50	Symbolic data analysis for post-big data **Masahiro Mizuta**
15:50 – 16:10	Classification on large-scale data: Theory and Simulations in the many variables case **Claus Weihs**

15.5.3 Design of Experiments

Date: Tuesday, March 15th, 14:50 – 16:10 *Location:* ZHG009
Chair: Norbert Benda

14:50 – 15:30	Design of Dose-Escalation Trials: Research Spurred by a Trial That Went Wrong **Rosemary Bailey**
15:30 – 15:50	Informing the design of early intervention trials for Alzheimer's disease **Marc Vandemeulebroecke**, *Johanna Mielke, Tillmann Krahnke, Peter Quarg*
15:50 – 16:10	Choice of doses in phase II/III development programs optimizing the probability of success **Sven Schnaidt**, *Meinhard Kieser*

15.5.4 Multi Level and Panel Data Analysis

Date: Tuesday, March 15th, 14:50 – 16:10   *Location:* ZHG005
Chair: Hans-Jürgen Andreß and Kilian Seng

14:50 – 15:10	Longitudinal Data with Missing Data and Measurement Error **Lisa Baganz**
15:10 – 15:30	Why and how severe fixed effects imputation might bias your random effects variances **Matthias Speidel**, *Jörg Drechsler, Joseph Sakshaug*

15.5.5 Official Statistics and Survey Statistics

Date: Tuesday, March 15th, 14:50 – 16:10   *Location:* ZHG104
Chair: Peter Schmidt

14:50 – 15:50	Monitoring statistical data preparation **Beat Hulliger**, *Daniel Kilchmann*
15:50 – 16:10	Civic Statistics: towards a new concept for understanding statistics about society **Joachim Engel**

15.5.6 Research Synthesis and Meta Analysis

Date: Tuesday, March 15th, 14:50 – 16:10   *Location:* ZHG007
Chair: Heinz Holling

14:50 – 15:10	Die Bewertung von Publikationen mit indirekten Vergleichen und Netzwerk Meta-Analysen **Ralf Bender**, *Sibylle Sturtz, Corinna Kiefer*
15:10 – 15:30	Evaluation nicht-adjustierter indirekter Vergleiche in der Nutzenbewertung - Simulationsstudie für Überlebenszeit-Endpunkte **Sarah Kühnast**, *Friedhelm Leverkus*
15:30 – 15:50	Graphical Exploration of the Impact of Direct Allocations of Missing Binary Outcome Data on the Meta-analysis and Network Meta-analysis Framework **Loukia Maria Spineli**, *Nikolaos Pandis*
15:50 – 16:10	Hypothesis testing for treatment arm differences in network meta-analyses **Lorenz Uhlmann**, *Katrin Jensen, Meinhard Kieser*

15.5.7 Small Area Analysis and Spatial Statistics

Date: Tuesday, March 15th, 14:50 – 16:10   *Location:* ZHG003
Chair: Susanne Schnorr-Bäcker and Volker Schmid

14:50 – 15:10	Spatial Modelling for Birth Weights, PFASs Water Contamination, and Their Dependence **Jonathan Rathjens**, *Eva-Maria Becker, Hans-Joachim Bücker-Nott, Nils Goeken, Jürgen Hölzer, Katja Ickstadt, Arthur Kolbe, Michael Wilhelm*
15:10 – 15:30	Black spot detection for traffic accidents on Funen based on hospital admission data **Ulrich Halekoh**, *Wagner Bonat, Birgit Debrabant, Jacob Hjelmborg, Jens Lauritsen*
15:30 – 15:50	Modeling non-stationary data for prediction **Helmut Waldl**
15:50 – 16:10	Graphical Modelling of Multivariate Spatial Point Patterns **Matthias Eckardt**

15.5.8 Survival and Event History Analysis

Date: Tuesday, March 15th, 14:50 – 16:10   *Location:* ZHG006
Chair: Martin Wolkewitz

14:50 – 15:10	Performance of Subgroup Selection Rules in Adaptive Enrichment Designs with Time-To-Event Outcome **Johannes Krisam**, *Meinhard Kieser*
15:10 – 15:30	A weighted combined effect measure for the analysis of a composite time-to-first-event endpoint with components of different clinical relevance **Geraldine Rauch**, *Christine Eulenburg, Karl Wegscheider, Meinhard Kieser*
15:30 – 15:50	The impact of selection bias on test decisions in survival analysis **Marcia Viviane Rückbeil**
15:50 – 16:10	Multiple imputation for missing covariate data in stratified cause-specific hazards models **Michael Lauseker**

15.5.9 Statistik Lehren an Schule und Universität - Fortgeschrittene Anwender

Date: Tuesday, March 15th, 14:50 – 16:10   *Location:* ZHG004
Chair: Mario Hasler and Theodor Framke

14:50 – 15:10	Komplexe statistische Verfahren in der Lehre für Anwender **Hubert Merkel**

15:10 – 15:30	Teaching statistics to postgraduates: experience from the German Cancer Research Center **Annette Kopp-Schneider**
15:30 – 15:50	Die Veränderungen der Angst und des Selbstkonzeptes zum Fach Statistik: Ein Pretest-Posttest-Design bei Studierenden der Sozialwissenschaften. **Manuel Förster**, *Andreas Maur*
15:50 – 16:10	Empirical Results on Students' Attitudes towards Statistics for People Studying while Working **Karsten Lübke**, *Thomas Christiaans, Frank P. Schulte*

15.5.10 Time Series Analysis

Date: Tuesday, March 15th, 14:50 – 16:10   *Location:* ZHG105
Chair: Christian Leschinski

14:50 – 15:10	Robust Inference in Panel Predictive Regressions of Unknown Persistence **Danvee Floro**, *Matei Demetrescu*
15:10 – 15:30	How far can we forecast? Statistical tests of the predictive content **Jörg Breitung**
15:30 – 15:50	Inference in Additive Nonlinear Predictive Models with Regressors of Uncertain Persistence *Matei Demetrescu*, **Benjamin Hillmann**
15:50 – 16:10	Multivariate Spurious Long Memory And A Robust Local Whittle Estimator **Christian Leschinski**, *Philipp Sibbertsen*

Tuesday, March 15th, 16:40 – 18:00

15.6.1 Design of Experiments

Date: Tuesday, March 15th, 16:40 – 18:00   *Location:* ZHG102
Chair: Rosemary Bailey

16:40 – 17:00	A novel analysis method for the biomarker-strategy design **Cornelia Ursula Kunz**, *Nigel Stallard*
17:00 – 17:20	Stratified Randomization in Comparative Clinical Trials in Small Populations **Lukas Malte Aguirre Dávila**, *Armin Koch*
17:20 – 17:40	The impact of bias on different randomization procedures **David Schindler**, *Ralf-Dieter Hilgers, Nicole Heussen, Diane Uschner*

17:40 – 18:00   Design of Excipient Compatibility Studies
                 Wannes GM Akkermans, *Hans Copenolle, Sabine Thielges, Peter Goos*

15.6.2 Mathematical Statistics in Life Science

Date: Tuesday, March 15th, 16:40 – 18:00   *Location:* ZHG104
Chair: Arnold Janssen

16:40 – 17:00   Simultaneous testing on different factors/ covariates: from Bonferroni
                 inequality to multiple marginal models
                 Ludwig A. Hothorn, *Christian Ritz, Philip Pallmann*
17:00 – 17:20   Two sample Kolmogorov-Smirnov type tests and local levels
                 Helmut Finner, *Veronika Gontscharuk*
17:20 – 17:40   Weighted Kolmogorov-Smirnov tests in one- and two-sample problems
                 Veronika Gontscharuk, *Helmut Finner*
17:40 – 18:00   Sample Size Determination for General Rank Tests
                 Edgar Brunner

15.6.3 Statistics in Clinical and Preclinical Research - Preclinical

Date: Tuesday, March 15th, 16:40 – 18:00   *Location:* ZHG009
Chair: Richardus Vonk

16:40 – 18:00   Statistics and mutagenicity/genotoxicity testing: past and future chal-
                 lenges
                 David Lovell

Wednesday, March 16th, 8:50 – 10:10

16.2.1 Bioinformatics-Expression data I

Date: Wednesday, March 16th, 8:50 – 10:10   *Location:* ZHG003
Chair: Harald Binder

08:50 – 09:10   Removing Batch Effects from Longitudinal Gene Expression – Quantile
                 Normalization Plus ComBat as Best Approach for Microarray Transcrip-
                 tome Data
                 Christian Müller, *Arne Schillert, Caroline Röthemeier, David-Alexandre
                 Trégouët, Carole Proust, Harald Binder, Norbert Pfeiffer, Manfred Beu-
                 tel, Karl J Lackner, Renate B Schnabel, Laurence Tiret, Philipp S Wild,
                 Stefan Blankenberg, Tanja Zeller, Andreas Ziegler*

09:10 – 09:30	Statistical analysis of dose- expression data: Fitting sigmoidal dose-response curves to gene expression profiles **Marianna Grinberg**, *Xiaoqi Jiang, Jan G. Hengstler, Annette Kopp-Schneider, Jörg Rahnenführer*
09:30 – 09:50	Testing Differentially Expressed Genes in Dose-Response Studies and with Ordinal Phenotypes **Jan Gertheiss**, *Elizabeth Sweeney, Ciprian Crainiceanu*
09:50 – 10:10	Automated identification of outliers in high-throughput expression data **Klaus Jung**, *Jochen Kruppa*

16.2.2 Cluster Analysis and Classification - Clustering applied

Date: Wednesday, March 16th, 8:50 – 10:10   *Location:* ZHG004
Chair: Claus Weihs

08:50 – 09:10	A classification of elite sports' national systems and its connection with international sporting success **Anne Renaud**, *Veerle De Bosscher, Hippolyt Kempf*
09:10 – 09:30	Functional data methods for clustering pigs according to their feeding behavior **Annette Möller**, *Jan Gertheiss, Engel Hessel*
09:30 – 09:50	Netboost: Boosting supported network analysis for highdimensional genomic datasets **Pascal Schlosser**, *Nadja Blagitko-Dorfs, Michael Lübbert, Martin Schumacher*
09:50 – 10:10	Classication with the pot-pot plot **Oleksii Pokotylo**, *Karl Mosler*

16.2.3 Design of Experiments

Date: Wednesday, March 16th, 8:50 – 10:10   *Location:* ZHG007
Chair: Marc Vandemeulebroecke

08:50 – 09:10	Design and analysis of a trial to select for stress tolerance **Hans-Peter Piepho**, *Mian Faisal Nazir, Kausar Nawaz Shah*
09:10 – 09:30	Do we need check plots in field trials? **Jens Möhring**, *Eberhard Laubach, Hans-Peter Piepho*
09:30 – 09:50	Statistical Evaluation and Analysis of PACTS trials as a series of on-farm strip trials without replicates **Paul Schmidt**, *Hans-Peter Piepho*
09:50 – 10:10	Application of imperialist competitive algorithm in optimal design **Ehsan Masoudi**, *Heinz Holling, Weng Kee Wong*

16.2.4 Mathematical Statistics in Life Science

Date: Wednesday, March 16th, 8:50 – 10:10   *Location:* ZHG105
Chair: Arne C. Bathke

08:50 – 09:10	Comparing laboratory methods with censored observations **Anne Lotz**, *Dirk Taeger, Katja Ickstadt*
09:10 – 09:30	Lebenserwartungsvergleiche zwischen einer Patientengruppe und einer Referenzbevölkerung **Georg Zimmermann**
09:30 – 09:50	Multivariate Survival Analysis **Arnold Janssen**
09:50 – 10:10	Some remarks on the use and interpretation of resampling tests in the biosciences **Ekkehard Glimm**, *Siegfried Kropf*

16.2.5 Methods for Risk and Benefit Assessment

Date: Wednesday, March 16th, 8:50 – 10:10   *Location:* ZHG102
Chair: Jürgen Kübler and Angelika May

08:50 – 09:30	Creating the future: moving benefit-risk decisions from implicit and qualitative to explicit and quantitative **Lawrence Phillips**
09:30 – 09:50	Mögliche Auswirkungen aktiver Folgetherapien beim Behandlungswechsel in onkologischen Studien **Lars Beckmann**, *Ulrich Grouven*
09:50 – 10:10	Can the labeling of treatment effects be value free? **Werner Vach**

16.2.6 Penalized and Regularized Regression Analysis

Date: Wednesday, March 16th, 8:50 – 10:10   *Location:* ZHG101
Chair: Thomas Kneib

08:50 – 09:30	Sensitivity of model assumptions for latent Gaussian models **Håvard Rue**
09:30 – 09:50	A measure of Bayesian sensitivity to flexible model assumptions using penalised complexity priors: an outline **Morten Holm Falk**
09:50 – 10:10	Scale-Dependent Priors for Variance Parameters in Structured Additive Distributional Regression **Nadja Klein**, *Thomas Kneib*

16.2.7 Psychometrics - Item Response Theory

Date: Wednesday, March 16th, 8:50 − 10:10   *Location:* ZHG005
Chair: Carolin Strobl

08:50 − 09:10	Different Approaches to Modeling Response Styles in IRT: Threshold and IR-Tree Models **Thorsten Meiser**, *Ulf Böckenholt*
09:10 − 09:30	A Simulation Study on Methods of Correcting for the Effects of Extreme Response Style **Eunike Wetzel**, *Jan R. Böhnke, Norman Rose*
09:30 − 09:50	Item bias and empirical distribution of Andersen's Likelihood-ratio test in Rasch model based adaptive testing **Klaus D. Kubinger**, *Jan Steinfeld*
09:50 − 10:10	Latent state IRT models with latent item difficulty variables **Rolf Steyer**, *Desiree Thielemann, Marie-Ann Sengewald, Gregor Kappler*

16.2.8 Statistics in Clinical and Preclinical Research - Miscellanous

Date: Wednesday, March 16th, 8:50 − 10:10   *Location:* ZHG104
Chair: Antje Jahn and Oliver Kuß

08:50 − 09:10	Interim decisions in clinical trials with time-to-event surrogate and primary endpoints **Matthias Brückner**, *Werner Brannath*
09:10 − 09:30	Multistate and joint modeling of recurrent hospitalizations and mortality in clinical trials: consequences on effect estimation and power **Antje Jahn**, *Fenja Nickel, Harald Binder*
09:30 − 09:50	Propensity scores methods and covariate adjustment for four cardiovascular datasets **Markus Christian Elze**, *John Gregson, Stuart Pocock*
09:50 − 10:10	Estimability of the treatment effect in the stepped wedge design under consideration of carry-over effects. **Ann Christina Foldenauer**

16.2.9 Statistics in Finance

Date: Wednesday, March 16th, 8:50 − 10:10   *Location:* ZHG006
Chair: Fabian Spanhel

08:50 − 09:10	Copula-MGARCH with dynamic conditional covariance decompositions *Helmut Herwartz,* **Fabian H.C. Raters**

09:10 – 09:30	Simplified vine copula models: Approximations based on the simplifying assumption
	Fabian Spanhel, *Malte S. Kurz*
09:30 – 09:50	Testing the simplifying assumption in high-dimensional vine copulas
	Malte S. Kurz, *Fabian Spanhel*
09:50 – 10:10	(Optimally-)Robust Risk Estimation
	Peter Ruckdeschel

16.2.10 Survival and Event History Analysis

Date: Wednesday, March 16th, 8:50 – 10:10 *Location:* ZHG009
Chair: Steffen Unkel

08:50 – 09:50	Longitudinal perspectives on event history analysis
	Robin Henderson
09:50 – 10:10	Parametric Non-PH Survival Modelling
	Gilbert MacKenzie

Wednesday, March 16th, 10:40 – 11:50

16.3 Plenary 1

Date: Wednesday, March 16th, 10:40 – 11:50 *Location:* ZHG011
Chair: Tim Friede

| 10:40 – 11:50 | Mendelian randomization: its potential and pitfalls |
| | **Simon Thompson** |

Wednesday, March 16th, 13:00 – 14:20

16.4.1 Bioinformatics-Expression data II

Date: Wednesday, March 16th, 13:00 – 14:20 *Location:* ZHG003
Chair: Martin Schäfer

13:00 – 13:20	Evaluation of sample size tools for RNA-seq differential expression analysis
	Alicia Poplawski, *Harald Binder*
13:20 – 13:40	A novel statistical model for competitive gene set analysis
	Birgit Debrabant
13:40 – 14:00	Positional Gene Enrichment Analysis
	Johann Kraus, *Matthias Platzer, Hans Kestler*

14:00 – 14:20	Functional Analysis of Biochemical Network Features using Sparse Group Lasso
	Satya Swarup Samal, Andreas Weber, Holger Fröhlich

16.4.2 Cluster Analysis and Classification - Clustering

Date: Wednesday, March 16th, 13:00 – 14:20   *Location:* ZHG004
Chair: Hans-Hermann Bock

13:00 – 13:20	Clustering with mixed-type data and its applications
	Manuela Hummel, Annette Kopp-Schneider
13:20 – 13:40	Testing for Compatible Partitions in Graph Clustering
	Fabian Ball, **Andreas Geyer-Schulz**
13:40 – 14:00	Big Data Clustering based on fast Pre-clustering
	Hans-Joachim Mucha
14:00 – 14:20	Clustering Multivariate Data Using Weighted Spatial Ranks
	Mohammed Baragilly, Biman Chakraborty

16.4.3 Design of Experiments

Date: Wednesday, March 16th, 13:00 – 14:20   *Location:* ZHG007
Chair: Ralf-Dieter Hilgers

13:00 – 13:20	Considerations on Experimental Designs for Sigmoidal Models
	Tobias Mielke
13:20 – 13:40	Optimal Designs for Copula Models
	Werner G. Müller
13:40 – 14:00	Generalized resolution for factorial designs
	Ulrike Grömping
14:00 – 14:20	Using efficiently the tradeoff accuracy/computing time to design good computer experiments
	Guillaume Sagnol, Hans-Christian Hege, Martin Weiser

16.4.4 Mathematical Statistics in Life Science

Date: Wednesday, March 16th, 13:00 – 14:20   *Location:* ZHG009
Chair: Markus Pauly

13:00 – 14:00	Confidence intervals post-model selection and other topics in model averaging
	Gerda Claeskens
14:00 – 14:20	Permuting longitudinal data despite all the dependencies
	Sarah Friedrich, Edgar Brunner, Markus Pauly

16.4.5 Penalized and Regularized Regression Analysis

Date: Wednesday, March 16th, 13:00 − 14:20   *Location:* ZHG105
Chair: Andreas Groll

13:00 − 13:20	Lasso with Splines - a Challenge for Boosting? **Manfred Berres**
13:20 − 13:40	A General Framework for Regression with Functional Data *Sarah Brockhaus*, **Sonja Greven**
13:40 − 14:00	Boosting Joint Models for Longitudinal and Time-to-Event Data **Elisabeth Waldmann**, *Andreas Mayr*
14:00 − 14:20	Boosting distributional regression models for multivariate responses **Andreas Mayr**, *Janek Thomas, Nadja Klein*

16.4.6 Psychometrics - Statistical Foundations of Psychometrics

Date: Wednesday, March 16th, 13:00 − 14:20   *Location:* ZHG005
Chair: Rolf Steyer

13:00 − 13:20	On Matrix Sampling and Imputation of Context Questionnaires with Implications for the Generation of Plausible Values in Large-Scale Assessments **David Kaplan**, *Dan Su*
13:20 − 13:40	Algebraic Solution for Maximum Likelihood Estimator in Structural Equation Models Frequently Used in Psychology **G. Timo von Oertzen**, *M. Joseph Meyer*
13:40 − 14:00	Meta-Analysis of Individual Differences Based on Sample Means and Standard Deviations: An Approach Using the Parameters of the Beta-Binomial Distribution **Philipp Doebler**, *Anna Doebler*
14:00 − 14:20	Testing for Moderators of Inter-Rater Reliability in Complex Settings As It Applies to Selection Instruments **Patricia Martinkova**, *Dan Goldhaber*

16.4.7 Robust and Nonparametric Statistics

Date: Wednesday, March 16th, 13:00 − 14:20   *Location:* ZHG006
Chair: Anne Leucht

13:00 − 13:20	Markov-switching generalized additive models **Roland Langrock**, *Thomas Kneib, Théo Michelot, Richard Glennie*

13:20 – 13:40	Anti-Proportional Bandwidth Selection for Smoothing Sparse and Non-Sparse Functional Data with Covariate Adjustments **Dominik Liebl**
13:40 – 14:00	Simplicial Depth Tests and Confidence Sets for Growth Models with Application in Enineering **Christoph Kustosz**, *Christine Müller, Anne Leucht, Martin Wendler*
14:00 – 14:20	Nonparametric identification and maximum likelihood estimation for hidden Markov models *Grigory Alexandrovich*, **Hajo Holzmann**, *Anna Leister*

16.4.8 Statistics in Clinical and Preclinical Research - PreClinical / Small Samples

Date: Wednesday, March 16th, 13:00 – 14:20   *Location:* ZHG104
Chair: Meinhard Kieser

13:00 – 13:20	Application of 3PL model to bioassay data with an incomplete dose-response curve **Swetlana Berger**, *Walter Hoyer, Angela Manginelli, Alexander Pysik*
13:20 – 13:40	Successful assay validation – how to ensure regulatory acceptance **Walter Hoyer**, *Tobias Mütze, Alexander Pysik*
13:40 – 14:00	Validating the similarity of regression curves with regard to small sample sizes **Kathrin Möllenhoff**, *Holger Dette*
14:00 – 14:20	Sample size calculation for animal experiments using the Jackknife and bootstrapping **Benjamin Mayer**

16.4.9 Statistics in Finance

Date: Wednesday, March 16th, 13:00 – 14:20   *Location:* ZHG101
Chair: Yarema Okhrin

13:00 – 14:00	A diagnostic criterion for approximate factor structure **Olivier Scaillet**
14:00 – 14:20	Bayesian Estimation of the Multi-Period Portfolio Weights for an Exponential Utility **David Bauder**, *Taras Bodnar, Nestor Parolya, Wolfgang Schmid*

16.4.10 Survival and Event History Analysis

Date: Wednesday, March 16th, 13:00 − 14:20   *Location:* ZHG102
Chair: Christian Röver

13:00 − 13:20	Tampered Failure Rate Step-Stress Models Under Interval Monitoring: A Bayesian Approach **Christian Kohl**, *Maria Kateri*
13:20 − 13:40	Comparing the Performance of Mixture Models for Human Mortality at the Oldest Ages **Trifon I. Missov**, *Laszlo Nemeth, Maciej J. Danko*
13:40 − 14:00	The current duration design for estimating the time to pregnancy distribution: a nonparametric Bayesian perspective *Dario Gasbarra*, **Elja Arjas**, *Aki Vehtari, Rémy Slama, Niels Keiding*
14:00 − 14:20	Shrinkage anticipation and correction by penalized and post-estimation shrinkage methods in Cox regression **Michael Kammer**, *Daniela Dunkler, Georg Heinze*

Wednesday, March 16th, 14:50 − 16:10

16.5 Award Session (GfKL und IBS-DR)

Date: Wednesday, March 16th, 14:50 − 16:10   *Location:* ZHG009
Chair: Tim Friede and Berthold Lausen

14:50 − 15:10	Bernd-Streitberg Preis der Internationalen Biometrischen Gesellschaft - Deutsche Region: Determining optimal cut-offs in the meta-analysis of diagnostic test accuracy studies **Susanne Steinhauser**
15:10 − 15:30	Gustav-Adolf-Lienert Preis der Internationalen Biometrischen Gesellschaft - Deutsche Region: Proper handling of over- and underrunning in phase II designs for oncology trials **Stefan Englert**
15:30 − 15:50	Preisträger der Gesellschaft für Klassifikation "best paper Award"

16.5.1 Observational Studies– Lessons Learned (?)

Date: Wednesday, March 16th, 14:50 – 16:10   *Location:* ZHG104
Chair: Ralph Brinks and Irene Schmidtmann

14:50 – 15:10	Registry studies and the problem of correct classification of exposure status: challenges and lessons learned **Maria Haller**, *Michael Kammer, Alexander Kainz, Rainer Oberbauer, Georg Heinze*
15:10 – 15:30	Statistical Analysis of Hip Replacement Data *Anne Kass, Martin Schumacher,* **Guido Schwarzer**
15:30 – 15:50	Truncation-by-death bias: Prevalent and relevant in epidemiological and aging cohort studies **Nadine Binder**, *Anette Blümle, Anne-Sophie Herrnböck, Edith Motschall, Patrick Oeller, Martin Schumacher*
15:50 – 16:10	Is Propensity Score Matching (strictly) inferior to other matching approaches? **Kilian Seng**

16.5.2 Psychometrics - invited talk

Date: Wednesday, March 16th, 14:50 – 16:10   *Location:* ZHG102
Chair: Andreas Frey

14:50 – 16:10	Computerized Adaptive Testing: The History, Development and New Directions **Ying 'Alison' Cheng**

16.5.3 Statistics in Finance

Date: Wednesday, March 16th, 14:50 – 16:10   *Location:* ZHG101
Chair: Holger Fink

14:50 – 15:10	Modeling and forecasting of realized volatility of CO_2 emission future contracts **Thijs Benschop**
15:10 – 15:30	Functional Liquidity and Low-Latency Volatility: The ACD-FunXL Model **Andreas Fuest**
15:30 – 15:50	Conditional distributions of fractional Lévy processes with application to financial time series and market modelling **Holger Fink**

15:50 − 16:10	Nonparametric Prediction of Stock Returns Based on Yearly Data: The Long-Term View
	Michael Scholz, *Jens Perch Nielsen, Stefan Sperlich*

Wednesday, March 16th, 14:50 − 16:10

16.6.1 Panel Discussion - The Future of Science Publishing

Date: Wednesday, March 16th, 16:40 − 18:00 *Location:* ZHG010
Chair: Karl Mosler

Participants: Tim Friede, Clemens Heine, Wolfram Horstmann, Yarema Okhrin, Martin Rasmussen

16.6.2 Observational Studies - Statistical Methods in Practice

Date: Wednesday, March 16th, 16:40 − 18:00 *Location:* ZHG104
Chair: Sigrid Behr and Anne Lotz

16:40 − 17:00	How to assess case-finding in chronic diseases?
	Ralph Brinks, *Annika Hoyer, Oliver Kuss*
17:00 − 17:20	A Bayesian SEIR model with flexible disease transmission rate to analyse the Ebola epidemic in Sierra Leone
	Philippe Lambert, *Gianluca Frasso*
17:20 − 17:40	Extracting a core set of variables for dynamic prediction models by simultaneous variable selection based on pseudo-values
	Daniela Zöller, *Irene Schmidtmann, Arndt Weinmann, Thomas Gerds, Harald Binder*
17:40 − 18:00	Comparing validity of scoring systems after Transarterial Chemoembolization of Hepatocellular Carcinoma
	Irene Schmidtmann, *Roman Kloeckner, Arndt Weinmann, Daniela Zöllner, Harald Binder*

16.6.3 Psychometrics - Assessment Methods and Applications

Date: Wednesday, March 16th, 16:40 − 18:00 *Location:* ZHG102
Chair: Klaus D. Kubinger

16:40 − 17:00	Modelling time on task effects between and within experimental time-limit conditions – A GLMM approach
	Frank Goldhammer, *Ulf Kroehne, Johannes Naumann*
17:00 − 17:20	On the estimation of standard errors in cognitive diagnosis models
	Michel Philipp, *Carolin Strobl, Jimmy de la Torre, Achim Zeileis*

17:20 – 17:40	Assessing the picture story exercise (PSE) with mixed multinomial logit- and Bradley-Terry-IRT-models **Georg Hosoya**, *Gregor Kappler, Felix Schönbrodt*
17:40 – 18:00	On the Measurement of Personality Types and Values **Thomas Hummel**, *Victoria-Anne Schweigert, Andreas Geyer-Schulz*

16.6.4 Statistics in Finance

Date: Wednesday, March 16th, 16:40 – 18:00 *Location:* ZHG101
Chair: Vasyl Golosnoy

16:40 – 17:00	Risks and Opportunities of Social Trading: Econometric Analysis of Social Trading Securities regarding Returns and underlying Virtual Trades. **Alexander Jonen**
17:00 – 17:20	Finite Sample Tests for Location: Welch vs. Mann-Whitney-Wilcoxon **Vasyl Golosnoy**, *Markus Pape*
17:20 – 17:40	Optimal shrinkage-based portfolio selection in high dimensions *Taras Bodnar*, **Yarema Okhrin**, *Nestor Parolya*
17:40 – 18:00	A Mixed Frequency Stochastic Volatility Model for Intraday Volatility Dynamics **Jeremias Bekierman**, *Bastian Gribisch*

Thursday, March 17th, 8:50 – 10:10

17.2.1 Bioinformatics- Data integration I

Date: Thursday, March 17th, 8:50 – 10:10 *Location:* ZHG005
Chair: Hans A. Kestler

08:50 – 09:10	Integrative analysis of multiple genomic variables using Bayesian models **Martin Schäfer**, *Hans-Ulrich Klein, Holger Schwender*
09:10 – 09:30	Mapping approaches for data integration with prognostic gene signatures **Aslihan Gerhold-Ay**, *Johanna Mazur, Leesa Wockner, Joanne Voisey, Ross Young, Charles P Morris, Bruce Lawford, Harald Binder*
09:30 – 09:50	Integrating domain knowledge in multi-classifier systems **Ludwig Lausser**, *Florian Schmid, Hans A. Kestler*
09:50 – 10:10	Exploring the landscape of DNA repair mutations using deep learning for DNA-Seq data and filtering by external knowledge **Moritz Hess**, *Danuta Galetzka, Sebastian Zahnreich, Thomas Hankeln, Heinz Schmidberger, Maria Blettner, Manuela Marron, Harald Binder*

17.2.2 Computational Statistics and Statistical Software - Spatial and Spatio-Temporal Analysis

Date: Thursday, March 17th, 8:50 – 10:10   *Location:* ZHG009
Chair: Achim Zeileis

08:50 – 09:30	Support of observations and predictions in spatial and temporal statistics: practical aspects and software challenges **Edzer Pebesma**
09:30 – 09:50	Spatial Modelling with the R package RandomFields **Martin Schlather**
09:50 – 10:10	Conditional Inference Trees for spatial hot spot detection **Markus Loecher**

17.2.3 Destroying data as a means of data protection – is it ethical?

Date: Thursday, March 17th, 8:50 – 10:10   *Location:* ZHG101
Chair: Iris Pigeot and Ronja Foraita

08:50 – 09:30	Forschungsethik und Datenschutz in Zeiten von Big Data **Bertram Raum**
09:30 – 09:50	Sharing clinical trial data on patient level **Martin Posch**, *Franz König, Peter Bauer*

17.2.4 Machine learning - Machine Learning for Big Data

Date: Thursday, March 17th, 8:50 – 10:10   *Location:* ZHG104
Chair: Myra Spiliopoulou

08:50 – 09:30	Data Analysis Challenges in Neuroscience: From Experimental Data to Brain Simulation **José M. Pena**
09:30 – 09:50	Strategies for classifier updates in ensemble learning from evolving data streams **Dariusz Brzezinski**, *Jerzy Stefanowski*
09:50 – 10:10	Faster Model Based Optimization through Resource Aware Scheduling Strategies **Jakob Richter**, *Helena Kotthaus, Bernd Bischl, Peter Marwedel, Jörg Rahnenführer, Michel Lang*

17.2.5 Mathematical Statistics in Life Science

Date: Thursday, March 17th, 8:50 – 10:10   *Location:* ZHG006
Chair: Edgar Brunner

08:50 – 09:10	Multivariate Inference, Ranks, Resampling, and the Brain **Arne C. Bathke**, *Sarah Friedrich, Solomon W. Harrar, Yvonne Höller, Frank Konietschke, Markus Pauly*
09:10 – 09:30	Multivariate functional principal component analysis for data observed on different (dimensional) domains **Clara Happ**, *Sonja Greven, Volker Schmid*
09:30 – 09:50	Adding observations in regression analysis **Hilmar Gerhard Drygas**

17.2.6 Robust and Nonparametric Statistics

Date: Thursday, March 17th, 8:50 – 10:10   *Location:* ZHG003
Chair: Claudia Becker

08:50 – 09:10	A test for independence based on the probability weighted empirical characteristic function **Anne Leucht**, *Claudia Strauch, Simos Meintanis*
09:10 – 09:30	Semi-parametric regional flood frequency analysis **Paul Kinsvater**, *Roland Fried, Jona Lilienthal, Friederike Deiters*
09:30 – 09:50	Quantile Constructions for Complete Lattices **Georg Schollmeyer**
09:50 – 10:10	Representation of sets of distributions and optimal inferential procedures **Robert Schlicht**

17.2.7 Statistics in Clinical and Preclinical Research - Adaptive Designs

Date: Thursday, March 17th, 8:50 – 10:10   *Location:* ZHG007
Chair: Geraldine Rauch

08:50 – 09:10	Extending a running exploratory time-to-event trial to a confirmatory trial *Ute von Wangenheim, Birgit Gaschler-Markefski,* **Kathrin Stucke-Straub**, *Frank Fleischer, Meinhard Kieser*
09:10 – 09:30	New developments in optimal adaptive two-stage designs for single-arm trials with binary outcome **Kevin Kunzmann**, *Meinhard Kieser*
09:30 – 09:50	Blinded sample size reestimation for time dependent negative binomial counts **Thomas Asendorf**, *Heinz Schmidli, Robin Henderson, Tim Friede*

09:50 – 10:10	Permutation tests for adaptive clinical trials **Florian Klinglmueller**, *Livio Finos, Martin Posch*

17.2.8 Statistics of High Dimensional Data

Date: Thursday, March 17th, 8:50 – 10:10   *Location:* ZHG102
Chair: Taras Bodnar and Tim Beißbarth

08:50 – 09:30	Identification of Novel Cell Types in the Brain Using Single-Cell Transcriptome Sequencing **Sandrine Dudoit**
09:30 – 09:50	Bayesian integrative analysis of omics data: Prediction models with informative selection priors **Manuel Wiesenfarth**, *Manuela Zucknick, Ana Corberán-Vallet*
09:50 – 10:10	Exact and Asymptotic Tests on a Factor Model in Low and Large Dimensions with Applications **Taras Bodnar**, *Markus Reiß*

17.2.9 Survival and Event History Analysis

Date: Thursday, March 17th, 8:50 – 10:10   *Location:* ZHG105
Chair: Waltraud Kahle

08:50 – 09:10	Non-parametric simulation of complex time-to-event data and its application to a simple joint model **Tobias Bluhmki**, *Claudia Schmoor, Arthur Allignol, Jan Beyersmann*
09:10 – 09:30	A flexible nonparametric cure survival model to analyse fertility progression in Germany **Vincent Bremhorst**, *Michaela Kreyenfeld, Philippe Lambert*
09:30 – 09:50	B-splines in generalized progressive hybrid censoring **Julian Górny**, *Erhard Cramer*
09:50 – 10:10	The Aalen-Johansen estimator for non-Markov multistate data *Carina Müller*, **Jan Beyersmann**, *Arthur Allignol*

17.2.10 Time Series Analysis

Date: Thursday, March 17th, 8:50 – 10:10   *Location:* ZHG004
Chair: Silke Weber

08:50 – 09:10	Zero-Inflation Models for Count Data Time Series with a Finite Range **Tobias Andreas Möller**, *Christian H. Weiß, Hee-Young Kim*

09:10 – 09:30	Missing data and imputation in periodically correlated heavy tailed processes **Christiana Drake**, Jacek Leskow, Aldo Garay
09:30 – 09:50	Testing for Zero Inflation and Overdispersion in Poisson INAR(1) Models **Annika Homburg**, Christian H. Weiß, Pedro Puig
09:50 – 10:10	Locating Gas Emission Sources by using the Gas Concentration in the Air **Silke Weber**, Claudia Kirch, Idris Eckley

Thursday, March 17th, 10:40 – 12:00

17.3 Plenary 2

Date: Thursday, March 17th, 10:40 – 12:00 *Location:* ZHG011
Chair: Berthold Lausen

10:40 – 12:00	Data-Driven Classification in the Social Sciences **Adalbert Wilhelm**

Thursday, March 17th, 13:00 – 14:20

17.4.1 Education for Statistics in Practice (Part I)

Date: Thursday, March 17th, 13:00 – 14:20 *Location:* ZHG009
Chair: Stephanie Roll and Christoph Muysers

13:00 – 14:20	Variable selection for statistical models: a review and recommendations for the practicing statistician **Georg Heinze, Daniela Dunkler**

17.4.2 Bioinformatics - Data integration II

Date: Thursday, March 17th, 13:00 – 14:20 *Location:* ZHG005
Chair: Jörg Rahnenführer

13:00 – 13:20	Building stable multivariable risk scores in GWAS consortia with partially overlapping SNP data **Anne-Sophie Stöhlker**, Alexandra Nieters, Martin Schumacher, Harald Binder
13:20 – 13:40	Exploring cell type deconvolution by a weighted regression approach for the resulting groups **Veronika Weyer**, Yasmin Abassi, Detlef Schuppan, Ernesto Bockamp, Harald Binder

13:40 − 14:00	Mixture of Experts Models for SNP Data Analysis
	Julia Schiffner, *Holger Schwender*
14:00 − 14:20	A Bayesian Hierarchical Model for the Analysis of PAR-CLIP Data
	Eva-Maria Hüßler, *Martin Schäfer, Holger Schwender, Pablo Landgraf*

17.4.3 Computational Statistics and Statistical Software - Computational Statistical Modeling

Date: Thursday, March 17th, 13:00 − 14:20   *Location:* ZHG105
Chair: Sonja Greven

13:00 − 13:20	A conceptional Lego toolbox for Bayesian distributional regression models
	Nikolaus Umlauf, *Nadja Klein, Meike Köhler, Sonja Greven, Achim Zeileis*
13:20 − 13:40	Boosting Historical Functional Models with an Application to Fermentation Data
	Sarah Brockhaus, *Michael Melcher, Friedrich Leisch, Sonja Greven*
13:40 − 14:00	glmertrees: recursive partitioning of generalized linear mixed models
	Marjolein Fokkema, *Niels Smits, Achim Zeileis, Torsten Hothorn, Henk Kelderman*
14:00 − 14:20	Approximating mixture distributions using finite numbers of components
	Christian Röver, *Tim Friede*

17.4.4 Design of Experiments

Date: Thursday, March 17th, 13:00 − 14:20   *Location:* ZHG104
Chair: Heiko Großmann

13:00 − 13:20	MSE-optimality of crossover designs
	Christoph Neumann, *Joachim Kunert*
13:20 − 13:40	On Adaptive Designs for Logistic Models with False Answers
	Fritjof Freise, *Paul-Christian Bürkner*
13:40 − 14:00	Optimal Designs for the Prediction in Hierarchical Random Coefficient Regression Models
	Maryna Prus, *Rainer Schwabe*
14:00 − 14:20	Optimal designs for full and partial likelihood information
	Maria Konstantinou, **Stefanie Gisela Marion Biedermann**, *Alan Charles Kimber*

17.4.5 Machine learning - Advanced Applications of Machine Learning

Date: Thursday, March 17th, 13:00 – 14:20   *Location:* ZHG003
Chair: José M. Peña

13:00 – 13:20	Do little interactions get lost in dark random forests? *Marvin N. Wright, Andreas Ziegler,* **Inke R. König**
13:20 – 13:40	Classification of complex diseases based on comprehensive genetic data using machine learning methods **Damian Gola**, *Jeanette Erdmann, Christopher P. Nelson, Niles J. Samani, Heribert Schunkert, Christina Willenborg, Lingyao Zeng, Inke R. König*
13:40 – 14:00	Looking smart: Relating gaze patterns to test performance **Benedict Christian Oliver Fabian Fehringer**

17.4.6 Mathematical Statistics in Life Science

Date: Thursday, March 17th, 13:00 – 14:20   *Location:* ZHG006
Chair: Sarah Friedrich

13:00 – 13:20	Asymptotically Robust Permutation Tests for Incomplete Paired Data **Lubna Amro**, *Markus Pauly*
13:20 – 13:40	Optimal rates for density estimators for incomplete and inaccurately measured data **Ursula U. Müller**
13:40 – 14:00	A generalization of Chao's lower bound estimator for zero-truncated one-inflated count data **Dankmar Böhning**, *Panicha Kaskasamkul*
14:00 – 14:20	Capture-recapture estimation based upon zero-truncated and one-inflated count data **Panicha Kaskasamkul**, *Dankmar Böhning*

17.4.7 Robust and Nonparametric Statistics

Date: Thursday, March 17th, 13:00 – 14:20   *Location:* ZHG101
Chair: Roland Fried

13:00 – 13:20	Sample size planning of two-arm trials generating discrete quantitative data **Stefan Wellek**
13:20 – 14:20	Monge–Kantorovitch Quantiles, Ranks, and Signs **Marc Hallin**

17.4.8 Statistics in Clinical and Preclinical Research - Adaptive Enrichment Designs

Date: Thursday, March 17th, 13:00 − 14:20   *Location:* ZHG007
Chair: Werner Brannath

13:00 − 13:20	Incorporating short-term data in biomarker-based subgroup selection in adaptive enrichment designs **Katharina Hees**, *Meinhard Kieser*
13:20 − 13:40	Adaptive enrichment designs for longitudinal data with blinded sample size reestimation **Roland Gerard Gera**, *Tim Friede*
13:40 − 14:00	Multi-marker enrichment designs: How to handle heterogeneous treatment effects in stratified clinical trials **Christina Beisel**, *Axel Benner, Christina Kunz, Annette Kopp-Schneider*
14:00 − 14:20	Impact of the interim analysis timing on power in adaptive enrichment designs **Laura Kohlhas**, *Meinhard Kieser*

17.4.9 Survival and Event History Analysis

Date: Thursday, March 17th, 13:00 − 14:20   *Location:* ZHG102
Chair: Maria Kateri

13:00 − 13:20	reliability prediction using regression models **Maik Döring**
13:20 − 13:40	Inference for a Type-I censored sequential k-out-of-n system **Marco Burkschat**, *Erhard Cramer, Julian Górny*
13:40 − 14:00	On generalizing the c index for survival data **Janez Stare**, *Nataša Kejžar*
14:00 − 14:20	Meta-analysis of type-II right censored samples with adjusted hazard rates **Stefan Bedbur**, *Udo Kamps*

17.4.10 Time Series Analysis

Date: Thursday, March 17th, 13:00 − 14:20   *Location:* ZHG004
Chair: Kerstin Reckrühm

13:00 − 13:20	Forecasting with Quantile Autoregressions **Marc-Oliver Pohle**
13:20 − 13:40	Ratio Tests under Limiting Normality *Uwe Hassler,* **Mehdi Hosseinkouchack**

13:40 – 14:00	Forecasting Stationary Processes under Asymmetric Loss
	Hans-Dieter Heike, Matei Demetrescu, **Anna S. Titova**
14:00 – 14:20	LASSO-GARCH Approach
	Iryna Okhrin, *Ostap Okhrin, Sasa Zikovic*

Thursday, March 17th, 14:50 – 16:10

17.5.1 Education for Statistics in Practice (Part II)

Date: Thursday, March 17th, 14:50 – 16:10 *Location:* ZHG009
Chair: Stephanie Roll and Christoph Muysers

| 14:50 – 16:10 | Variable selection for statistical models: a review and recommendations for the practicing statistician |
| | **Georg Heinze, Daniela Dunkler** |

17.5.2 Computational Statistics and Statistical Software - Statistical Software in R

Date: Thursday, March 17th, 14:50 – 16:10 *Location:* ZHG105
Chair: Matthias Schmid

14:50 – 15:10	Modelling ordinal data with random effects: The R-package brms
	Paul-Christian Bürkner
15:10 – 15:30	Stability selection for boosted generalized additive models for location, scale and shape
	Janek Thomas, *Andreas Mayr, Benjamin Hofner, Bernd Bischl*
15:30 – 15:50	tscount: An R Package for Analysis of Count Time Series Following Generalized Linear Models
	Tobias Liboschik, *Roland Fried, Konstantinos Fokianos*
15:50 – 16:10	papeR: A Toolbox for Writing Pretty Papers and Reports
	Benjamin Hofner

17.5.3 Design of Experiments

Date: Thursday, March 17th, 14:50 – 16:10 *Location:* ZHG104
Chair: Werner G. Müller

| 14:50 – 15:10 | Model robust designs for survival trials |
| | *Maria Konstantinou, Stefanie Gisela Marion Biedermann,* **Alan Charles Kimber** |

15:10 – 15:30	Optimal Design for Multiple Regression with Information Driven by the Linear Predictor **Dennis Schmidt**, *Rainer Schwabe*
15:30 – 15:50	Optimal cutpoints for random observations **Marius Schmidt**, *Rainer Schwabe*
15:50 – 16:10	Exact designs for partial-profile paired choice experiments **Heiko Großmann**

17.5.4 Graphical Models and Causal Inference

Date: Thursday, March 17th, 14:50 – 16:10   *Location:* ZHG101
Chair: Andreas Geyer-Schulz

14:50 – 15:50	A complete adjustment criterion for the computation of causal effects **Marloes Maathuis**, *Emilija Perkovic, Markus Kalisch, Johannes Textor*
15:50 – 16:10	Causal Models in Marketing Research and Practice: A Review **Martin Klarmann**

17.5.5 Machine learning - Tuning and Estimations

Date: Thursday, March 17th, 14:50 – 16:10   *Location:* ZHG003
Chair: Jerzy Stefanowski

14:50 – 15:10	Calibrating random forests for probability estimation **Theresa Dankowski**, *Andreas Ziegler*
15:10 – 15:30	On the use of the out-of-bag error for tuning parameter selection in random forests **Silke Janitza**
15:30 – 15:50	Learning from monitoring unlabelled data under large verification latency **Georg Krempl**, *Vera Hofer*
15:50 – 16:10	Online F-Measure Optimization *Robert Busa-Fekete*, **Eyke Hüllermeier**

17.5.6 Statistics in Clinical and Preclinical Research - Targeted Therapies

Date: Thursday, March 17th, 14:50 – 16:10   *Location:* ZHG007
Chair: Hans-Jürgen Lomp

14:50 – 15:10	Optimizing trial designs for targeted therapies - A decision theoretic approach comparing sponsor and public health perspectives **Thomas Ondra**, *Sebastian Jobjörnsson, Robert Beckman, Carl-Fredrik Burman, Franz König, Nigel Stallard, Martin Posch*

15:10 – 15:30	Probability of success for phase III after exploratory biomarker analysis in phase II **Heiko Götte**, *Marietta Kirchner, Martin Oliver Sailer*
15:30 – 15:50	Analysis, sample size calculation and recalculation in designs with multiple nested subgroups **Marius Placzek**, *Tim Friede*
15:50 – 16:10	Exploratory subgroup analysis by recursive segmentation **Alexander Hapfelmeier**

17.5.7 Statistics in Natural Sciences and Technology

Date: Thursday, March 17th, 14:50 – 16:10   *Location:* ZHG006
Chair: Sonja Kuhnt

14:50 – 15:10	Nonparametric Bayesian System Reliability with Sets of Priors **Gero Walter**, *Louis Aslett, Frank Coolen*
15:10 – 15:30	Comparison of prediction intervals for state dependent point processes with application to fatigue experiments **Sebastian Szugat**, *Christine H. Müller*
15:30 – 15:50	Uncertainty Development in Process Chains **Oliver Meyer**, *Jörg Keller, Claus Weihs*
09:30 – 09:50	Wind Speed and Power Forecasting Under Asymmetric Loss **Daniel Ambach**, *Wolfgang Schmid*

17.5.8 Survival and Event History Analysis

Date: Thursday, March 17th, 14:50 – 16:10   *Location:* ZHG102
Chair: Udo Kamps

14:50 – 15:10	Random forests for survival analysis using maximally selected rank statistics **Marvin N. Wright**, *Theresa Dankowski, Andreas Ziegler*
15:10 – 15:30	The log-normal shared frailty model: Confidence intervals for the frailty variance **Katharina Hirsch**, *Andreas Wienke*
15:30 – 15:50	Pathways from School to Work: Gauging Semi-Markov-Models using Data Features *Ulrich Pötter*, **Melanie Böwing-Schmalenbrock**
15:50 – 16:10	Flexible Bayesian Joint Modeling of Longitudinal and Time-to-Event Data with an Application to Antibody Trajectories and Time to Type 1 Diabetes **Meike Köhler**, *Nikolaus Umlauf, Sonja Greven*

17.6.2 Machine learning - Advanced Supervised Learning Tasks

Date: Thursday, March 17th, 16:40 – 18:00   *Location:* ZHG101
Chair: Berthold Lausen

16:40 – 17:00	Asymptotic consistency and order specification for logistic classifier chains in multi-label learning **Paweł Teisseyre**
17:00 – 17:20	Improving Rule-based Classifiers Learned from Class-imbalanced Data **Jerzy Stefanowski**
17:20 – 17:40	Efficient Global Optimization Using Classical Linear Regression **Daniel Horn**, *Malte Jastrow, Claus Weihs*
17:40 – 18:00	Active Selection of Difficult Classes **Marianne Stecklina**, *Tuan Pham Minh, Tim Sabsch, Cornelius Styp von Rekowski, Daniel Kottke, Georg Krempl, Matthias Deliano, Myra Spiliopoulou*

17.6.3 Statistics in Natural Sciences and Technology

Date: Thursday, March 17th, 16:40 – 18:00   *Location:* ZHG102
Chair: Dirk Surmann

16:40 – 17:00	On a mixture model for directional data on the sphere with applications to modelling the microstructure of materials **Jürgen Franke**, *Claudia Redenbach, Na Zhang*
17:00 – 17:20	A homogeneity test for highly skewed and cross-correlated data in regional flood frequency analysis **Jona Lilienthal**, *Roland Fried, Andreas Schumann*
17:20 – 17:40	Exact inference on scaling parameters in norm and antinorm contoured multivariate sample distributions **Wolf-Dieter Richter**
17:40 – 18:00	Determination of guard bands for quality characteristics using copula-based models for longitudinal data **Vera Hofer**, *Johannes Leitner, Thomas Nowak, Horst Lewitschnig*

Friday, March 18th, 8:50 – 10:10

18.2.1 Bioinformatics- Networks and Proteomics

Date: Friday, March 18th, 8:50 – 10:10   *Location:* ZHG004
Chair: Manuela Zucknick

08:50 – 09:10	Temporal centrality measures for incomplete sequences of graph snapshots in dynamic network settings **Moritz Hanke**, *Ronja Foraita*
09:10 – 09:30	Information theory-based statistics to detect gene-gene interactions **Paola G. Ferrario**, *Jörg Malten, Bertram Müller-Myhsok, Kristel Van Steen, Inke R. König*
09:30 – 09:50	Comparison of preprocessing methods for the Luminex® xMap® technology **Tanja K. Rausch**, *Arne Schillert, Andreas Ziegler, Angelika Lueking, Hans-Dieter Zucht, Peter Schulz-Knappe*
09:50 – 10:10	Phylogenetic comparison by similarity search in tandem mass spectra **Vera Rieder**, *Bernhard Blank-Landeshammer, Karsten Biß, Laxmikanth Kollipara, Albert Sickmann, Jörg Rahnenführer*

18.2.2 Empirical Economics and Applied Econometrics

Date: Friday, March 18th, 8:50 – 10:10   *Location:* ZHG003
Chair: Axel Werwatz

08:50 – 09:10	Flexible HAR Model for Realized Volatility *Francesco Audrino, Chen Huang,* **Ostap Okhrin**
09:10 – 09:30	Electricity Price Forecasting Using Supply-Demand Curves **Florian Ziel**, *Rick Steinert*
09:30 – 09:50	Environmental Awareness In Russia *Dilya Khakimova,* **Stefanie Lösch**, *Ostap Okhrin, Danny Wende, Hans Wiesmeth*
09:50 – 10:10	The synthetic control method: Some small T, small N monte carlo evidence and an application to the effects of privatizing probation services on revoke rates. **Philipp Süß**

18.2.3 Penalized and Regularized Regression Analysis

Date: Friday, March 18th, 8:50 – 10:10 *Location:* ZHG007
Chair: Georg Heinze

08:50 – 09:10	The case-crossover design via penalized regression **Sam Doerken**, *Peggy Sekula, Martin Schumacher*
09:10 – 09:30	Modeling physical activity data using L0-penalised expectile regression **Fabian Sobotka**, *Norman Wirsik*
09:30 – 09:50	Genetic risk scores with weights from elastic net regression: A method to detect gene-environment interactions in small study populations **Anke Hüls**, *Katja Ickstadt, Tamara Schikowski, Ursula Krämer*
09:50 – 10:10	Modeling Football Results in Penalized Ordinal Bradley-Terry Models Including Match-specific Covariates *Gunther Schauberger*, **Andreas Groll**

18.2.4 Robust and Nonparametric Statistics

Date: Friday, March 18th, 8:50 – 10:10 *Location:* ZHG105
Chair: Claudia Becker

08:50 – 09:10	Posterior Sensitivity of Variance Priors in Bayesian Structured Additive Regression **Helene Roth**, *Stefan Lang*
09:10 – 09:30	Copula-based dependence measures for regression analysis **Eckhard Liebscher**
09:30 – 09:50	Lower bounds for the rates of convergence in estimation under multi-index constraint **Nora Serdyukova**
09:50 – 10:10	Comparison of standard and robust logistic regression with different weighting functions **Miriam Kesselmeier**, *Justo Lorenzo Bermejo*

18.2.5 Statistics in Agriculture and Ecology - Animal Breeding and Statistical Genetics

Date: Friday, March 18th, 8:50 – 10:10 *Location:* ZHG006
Chair: Norbert Reinsch

08:50 – 09:10	An alternative model for an analysis of imprinting effects on beef traits in dual-purpose Simmental **Inga Blunk**, *Manfred Mayer, Henning Hamann, Norbert Reinsch*

09:10 – 09:30	Can the site-frequency spectrum distinguish population growth from multiple-merger coalescents? *Bjarki Eldon, Matthias Birkner, Jochen Blath, **Fabian Freund***
09:30 – 09:50	A Statistical Framework for Multivariate GWAS using Kernel-based Global Score Test ***Ngoc-Thuy Ha**, Martin Schlather, Henner Simianer*
09:50 – 10:10	Validating the use of the theoretical covariance between SNP markers for genetic evaluations in half-sib families ***Jan Klosa**, Dörte Wittenburg*

18.2.6 Statistics in Clinical and Preclinical Research - Diagnostics

Date: Friday, March 18th, 8:50 – 10:10   *Location:* ZHG104
Chair: Carsten Schwenke

08:50 – 09:10	Consideration of covariates in diagnostic studies ***Antonia Zapf***
09:10 – 09:30	Confidence Intervals for the difference of proportions adjusted for covariates ***Verena Endriß**, Benjamin Lang, Jan Beyersmann, Frank Fleischer*
09:30 – 09:50	Reporting of prognostic tumour markers studies after the introduction of the REMARK guideline needs improvement ***Peggy Sekula**, Mallett Susan, Altman Doug, Sauerbrei Willi*
09:50 – 10:10	Modelling of reader effects in diagnostic studies and their comparison using simulation studies ***Stefan Beimel***

18.2.7 Statistics in Natural Sciences and Technology

Date: Friday, March 18th, 8:50 – 10:10   *Location:* ZHG102
Chair: Wolf-Dieter Richter

08:50 – 09:10	Statistical calibration of numerical weather prediction models for renewable energy forecasts ***Marek Brabec**, Pavel Krc, Krystof Eben, Pavel Jurus, Emil Pelikan*
09:10 – 09:30	Modell-based Selection of Measuring Positions for Energy Transmission Systems ***Dirk Surmann**, Uwe Ligges, Claus Weihs*
15:50 – 16:10	Feasible accurate ARL calculation for MEWMA control charts ***Sven Knoth***
09:50 – 10:10	Statistics against Stoppovers: Predicting the Range of Electrical Vehicles ***Robert Hable**, Christian Kluge*

18.2.8 Structural Equation Modelling

Date: Friday, March 18th, 8:50 – 10:10 *Location:* ZHG101
Chair: Rolf Steyer

08:50 – 09:50	lavaan and the (computational) history of structural equation modeling **Yves Rosseel**
09:50 – 10:10	SEM in Experimental Designs: Is asymptotic theory useful in small data sets? **Steffen-Matthias Kühnel**, *André Dingelstedt*

18.2.9 Visualisation and Exploratory Data Analysis

Date: Friday, March 18th, 8:50 – 10:10 *Location:* ZHG009
Chair: Christian Hennig

08:50 – 09:50	Combining Data Visualization and Analytics — Examples and Problems **Andreas Buja**
09:50 – 10:10	Interactive Scagnostics **Katrin Grimm**, *Antony Unwin*

Friday, March 18th, 10:40 – 12:00

18.3.1 Bioinformatics- invited

Date: Friday, March 18th, 10:40 – 12:00 *Location:* ZHG009
Chair: Jörg Rahnenführer and Hans A. Kestler

10:40 – 11:40	Custom-tailoring combination drug therapies with bioinformatics **Thomas Lengauer**
11:40 – 12:00	Pan-cancer studies with Bayesian rank-based clustering **Manuela Zucknick**

18.3.2 Empirical Economics and Applied Econometrics

Date: Friday, March 18th, 10:40 – 12:00 *Location:* ZHG101
Chair: Helmut Farbmacher

10:40 – 11:20	Identification- and Singularity- Robust Inference for Moment Condition Models **Patrik Guggenberger**

11:20 – 11:40	Estimation with many weak moment conditions using regularized CUE (MEA) **Helmut Farbmacher**
11:40 – 12:00	Estimation of a High-Dimensional Random Coefficient Model **Martin Spindler**

18.3.3 Open Topics

Date: Friday, March 18th, 10:40 – 12:00   *Location:* ZHG003
Chair: Fabian Sobotka

10:40 – 11:00	Beweis der Simes'schen Ungleichung für die F-Tests von normalverteilten korrelierten Variablen **Jürgen Läuter**
11:00 – 11:20	Beyond exomes: a nonparametric collapsing test for joint analysis of rare variants **Dmitriy Drichel**, *André Lacour, Christine Herold, Michael Nothnagel, Tim Becker*
11:20 – 11:40	Mutations causing complex disease may under certain circumstances be protective in an epidemiological sense *Sabine Siegert, Andreas Wolf, David Cooper, Michael Krawczak,* **Michael Nothnagel**

18.3.4 Penalized and Regularized Regression Analysis

Date: Friday, March 18th, 10:40 – 12:00   *Location:* ZHG007
Chair: Elisabeth Waldmann

10:40 – 11:00	Sparse Bayesian Modelling for Categorical Predictors **Daniela Pauger**, *Helga Wagner, Gertraud Malsiner-Walli*
11:00 – 11:20	Firth's penalized likelihood logistic regression: accurate effect estimates AND predictions? **Angelika Geroldinger**, *Rainer Puhr, Mariana Nold, Lara Lusa, Georg Heinze*
11:20 – 11:40	A Bayesian approach to sample selection for non-normal distributed outcomes using copulas **Paul Frederick Victor Wiemann**, *Nadja Klein, Thomas Kneib*
11:40 – 12:00	Vines Estimation for Mixed Data using Penalized Splines **Christian Schellhase**, *Göran Kauermann*

18.3.5 Robust and Nonparametric Statistics

Date: Friday, March 18th, 10:40 – 12:00   *Location:* ZHG105
Chair: Hajo Holzmann

10:40 – 11:00	Change Point Inference for Heterogeneuous Data **Florian Pein**, *Hannes Sieling, Axel Munk*
11:00 – 11:20	Autocovariance estimation in change-point model via difference schemes **Inder Rafael Tecuapetla-Gómez**
11:20 – 11:40	Robust and nonparametric detection of shifts in time series using two-sample U-statistics and U-quantiles **Roland Fried**, *Herold Dehling, Martin Wendler*

18.3.6 Statistics in Agriculture and Ecology - Animal Breeding and Agricultural Economics

Date: Friday, March 18th, 10:40 – 12:00   *Location:* ZHG006
Chair: Roland Langrock

10:40 – 11:00	Bayessche Schätzung von Markereffekten: Autoregression vs. Random-Walk **Manuela Reichelt**, *Manfred Mayer, Friedrich Teuscher, Norbert Reinsch*
11:00 – 11:20	Schätzung von Rekombinationsraten in einer Halbgeschwister-Familie beim Milchrind **Alexander Hampel**, *Friedrich Teuscher, Dörte Wittenburg*
11:20 – 11:40	Exploring retail pricing behavior by logistic regressions **Christin Schulze Bisping**, *Stephan von Cramon-Taubadel*

18.3.7 Statistics in Clinical and Preclinical Research - Phase I / Multi-arm Trials

Date: Friday, March 18th, 10:40 – 12:00   *Location:* ZHG104
Chair: Stefan Wellek

10:40 – 11:00	Simultaneous confidence regions for multi-parameter bioequivalence **Philip Pallmann**, *Thomas Jaki*
11:00 – 11:20	Recommendations on the use of exact critical values in testing for bioequivalence **Benjamin Lang**, *Frank Fleischer*
11:20 – 11:40	A permutation-based approach for three-arm trials with active and placebo controls **Tobias Mütze**, *Frank Konietschke, Tim Friede*

11:40 – 12:00   Multi-arm trials with multiple primary endpoints and missing values
Mario Hasler, *Ludwig A. Hothorn*

18.3.8 Statistics in Natural Sciences and Technology

Date: Friday, March 18th, 10:40 – 12:00   *Location:* ZHG102
Chair: Sven Knoth

10:40 – 11:20   Optimal design of mixture experiments
Peter Goos

11:20 – 11:40   Modeling and Experimental Design for the Development of robust Gas Sensors
Sebastian Krey, *Margarita Alejandra Rebolledo Coy, Dimitri Gusew, Viktoria Schaale, Jörg Stork, Thomas Bartz-Beielstein*

11:40 – 12:00   Sensitivity analysis, modelling and optimisation in computer experiments by using FANOVA graphs
Sonja Kuhnt

18.3.9 Structural Equation Modelling

Date: Friday, March 18th, 10:40 – 12:00   *Location:* ZHG004
Chair: Helmut Herwartz

10:40 – 11:00   Implicit rescaling in multivariate mixed-effects models with nonmetric outcomes
Christoph Kern, *Petra Stein*

11:00 – 11:20   Is the PLS approach in path modelling a structural equation model (SEM) approach with latent variables or not?
Jörg Betzin

11:20 – 11:40   A Note on Dynamic Identification / Estimation in Feed-back Regression
Jochen Mau

11:40 – 12:00   Invariant Models in Changing Environments
Jonas Peters, *Peter Bühlmann, Nicolai Meinshausen, Mateo Rojas-Carulla, Bernhard Schölkopf*

18.3.10 Visualisation and Exploratory Data Analysis

Date: Friday, March 18th, 10:40 – 12:00   *Location:* ZHG005
Chair: Willi Sauerbrei

10:40 – 11:00   Exploration of the variability of variable selection based on distances between bootstrap sample results
Christian Hennig, *Willi Sauerbrei*

11:00 – 11:20	Comparative Analyses on Multiple Outlier Detection Methods for Correlated Covariates **Shahina Rahman**, *Marianne Huebner, Riccardo De Bin, Anne-Laure Boulesteix, Willi Sauerbrei*
11:20 – 11:40	Detection of influential points as a byproduct of resampling-based model-building procedures **Riccardo De Bin**, *Willi Sauerbrei, Anne-Laure Boulesteix*
11:40 – 12:00	Tensorlab: A toolbox for (multilinear) data analysis *Martijn Boussé,* **Otto Debals**, *Frederik Van Eeghem, Nico Vervliet, Lieven De Lathauwer*

Friday, March 18th, 12:00 – 13:00

18.4 Closing

Date: Friday, March 18th, 12:00 – 13:00   *Location:* ZHG011
Chair: Thomas Kneib

12:00 – 13:00	Numerical weather prediction and statistics **Hans Rudolf Künsch**

Poster Session

Wednesday, March 16th, 18:00 − 22:00

Location: ZHG, Foyer

P.1 A First-Difference Penalized Spline Estimator For Panel Data
Peter Pütz, *Thomas Kneib*

P.2 A Hierarchical Bayesian Model for joint Clustering of Clinical and Heterogenous Omics Data
Ashar Ahmad, *Holger Fröhlich*

P.3 A Markov regime-switching model of crude oil market integration
Konstantin Kuck, **Karsten Schweikert**

P.4 A mixture Weibull-Exponential model approach for signal detection using longitudinal electronic health records
Odile Sauzet, *Victoria Cornelius*

P.5 A multi-economy investigation on permanent and transitory components of inflation uncertainty
Maren Ulm, *Helmut Herwartz, Matthias Hartmann*

P.6 A multilevel analysis of poverty determinants in old age
Hend Mohammed Kamel Mohammed Gabr

P.7 A New Computational Method to Make Dynamic Mathematical Models Complete and Consistent
Benjamin Engelhardt, *Maik Kschischo, Holger Fröhlich*

P.8 A new graphical sensitivity analysis method representing the influence of missing binary outcome data on the overall effect estimates in meta-analysis
Klara Toth-Szabo, *Julia Singer, Lilla Juhasz*

P.9 A new Method for Non-Negative Tensor Factorization Applied to Binary Test Data
Thomas Siegert, Reinhard Schachtner, Gerhard Pöppel, Elmar W. Lang

P.10 A problem in reaggregating logit effects
Gregor Kappler, *Andreas Neudecker, Elisa Wiedmann, Rolf Steyer*

P.11 Aggregated-Data Analysis of the Relationship between Major Components of Native American Ancestry and Mortality due to Gallbladder Cancer in Chile
Justo Lorenzo Bermejo, Felix Boekstegers, **Rosa González Silos**, *Katherine Marcelain, Macarena Fuentes Guajardo, Francisco Rothhammer*

P.12 An application on AR(1) process in quality control
Özlen Erkal Sönmez

P.13 Analysis of means with the R package 'ANOM'
      Philip Pallmann, *Ludwig A. Hothorn*

P.14 Application of Causal diagram on DAGITTY Software
      Mohammed Elsadig Mansour

P.15 Asymptotic distribution for a class of general change-point tests and estimators
      Stefanie Schwaar

P.16 Bayesian extrapolation with the help of meta-analytic methods
      Kristina Weber, *Armin Koch*

P.17 Beyond Mean-Centred Health Effect Assessment. Assessing Comprehensive Health
      Distributions using Structured Additive Distributional Regression
      Alexander Sohn

P.18 Comparison of high-throughput DNA methylation association analyses approaches
      with reference-free cell type adjustment
      Miriam Kesselmeier, *André Scherag*

P.19 Computationally Efficient Estimation of Multinomial and Panel Probit Models
      Constantin Weiser, *Florian Heiß, Michael Griebel, Jens Oettershagen*

P.20 Construction of confidence intervals for effect measures adjusted for the sensitivity
      and specificity of a diagnostic test
      Áron Dániel Anton, *Júlia Singer*

P.21 DoE for analytical method development – how to distinguish good from bad?
      Carsten Kauntz, *Swetlana Berger, Walter Hoyer, Alexander Pysik*

P.22 Effects of Microscopic Limit Order Book Structure on Price Formation
      Martin Uwe Vogt, *Stephan Eule*

P.23 Eigen-Epistasis for detecting Gene-Gene interactions
      Virginie Stanislas

P.24 Employing Machine Learning Approaches in Social Scientific Analyses
      Arne Bethmann, *Jonas Beste*

P.25 Estimators of the false discovery rate and their application in low-dimensional set-
      tings
      Regina Brinster, *Martin Schumacher, Peggy Sekula*

P.26 Evidence synthesis for clinical trials in small populations
      Steffen Unkel, *Christian Röver, Tim Friede*

P.27 Exact methods for change point detection in binary sequences applied to observa-
      tional studies
      David Ellenberger, *Tim Friede*

P.28 Führen p-Werte für Patientencharakteristiken zur Auswahlverzerrung bei pub-
      lizierten randomisierten Studien?
      Johannes Hüsing, *Koch Martin*

P.29 Genomic Prediction based on the Epistasis Model: Properties, Problems and Perspectives
Johannes Wolfgang Robert Martini, *Valentin Wimmer, Malena Erbe, Henner Simianer*

P.30 Identifying Credit Shocks by Combining Conventional and Statistical Means: Evidence from the US
Hannes Rohloff, *Helmut Herwartz*

P.31 Impact of different stratification strategies in a two-phase study on the cardiovascular risk in type 2 diabetic patients
Dirk Enders, *Iris Pigeot*

P.32 Inter-linkages between women's intrahousehold bargaining power and clean fuel adoption in sub saharan africa: a simultaneous equation model appication
Soazic Elise Wang Sonne

P.33 Joint pausiness in parallel spike trains
Matthias Gärtner, *Sevil Duvarci, Jochen Roeper, Gaby Schneider*

P.34 Kangar00: A new R-package for Kernel-Based Pathway Analysis with an Application in Meta-Analysis of Lung Cancer Genome-wide Association Studies
Stefanie Friedrichs, *Juliane Manitz, Benjamin Hofner, Christopher I Amos, Paul Brennan, David C Christiani, Rayjean J Hung, Angela Risch, Irene Brüske, Heike Bickeböller*

P.35 Linear and Logistic Regression via LASSO and BOOSTING - A simulation study based on correlated data
Lukas Lasota

P.36 Local and long-range movement of bumblebees
Kristy Leah Udy, *Hannah Reininghaus*

P.37 Logistic difficulties and lack of compliance in a randomized multicentre clinical trial on the rehabilitation of paretic stroke patients: Lessons learned from a study on videotherapy
Christina Loley, *Denis Ertelt, Katja Krockenberger, Joseph Classen, Björn Hauptmann, Horst Hummelsheim, Michael Jöbges, Stefan Knecht, Thomas Münte, Jose Valdueza, Ferdinand C. Binkofski, Andreas Ziegler*

P.38 Making research reproducible using literate programming
Sebastian Sauer, *Yvonne Ferreira, Sandra Sülzenbrück, Christoph Kurz*

P.39 Minimierungsmethode bei binärem Outcome und kleiner Fallzahl
Christina Fitzner, *Lukas Aguirre Dávila, Ralf-Dieter Hilgers*

P.40 Modeling Skewed Distributions for Count Measures in Health Economics
Christoph Franz Kurz, *Rolf Holle*

P.41 Modelling Heterogeneous Variance with Spatial Variance Covariance Structure in Maize Trials
Tigist Mideksa Damesa, *Jens Möhring, Hans-Peter Piepho*

P.42 Modified correlation and regression method using multi p- and r-value-analysis
Carsten Siewert, *Karl Rohn, Hermann Seifert*

P.43 Multi-scale detection of rate and variance changes in point processes
Stefan Albert, *Michael Messer, Julia Schiemann, Jochen Roeper, Gaby Schneider*

P.44 Multivariate Neighborhood Penalties in Simultaneous Equation Models
Hauke Rennies, *Nadja Klein, Thomas Kneib*

P.45 Non-interest income significance for banks' profits and application of Golden Ratio analysis on Turkish banks' profits
Huseyin Cetin

P.46 Observation Oriented Modelling as a Data Analytic Tool
Karsten Lübke, *Sebastian Sauer*

P.47 Optimal designs for the crossover model with random interactions between units and treatments
Joanna Wiedom, *Joachim Kunert*

P.48 Optimality and construction of triallel cross experiments
Kazuhiro Ozawa

P.49 Pathway-based integration of time-series omics data using public database knowledge
Astrid Wachter, *Tim Beissbarth*

P.50 Personalized Medicine in Pharma Industry: New Challenges for Data Sciences
Holger Fröhlich, *Robert Warnock*

P.51 Pictogramm-Plots mit R
Hans Peter Wolf

P.52 PlainT: Plain Table Markup Language
Fabian H.C. Raters

P.53 Price Discovery Measures in Agricultural Markets
Evgenia Pavlova

P.54 Principle considerations regarding the use of adaptive designs for trials in rare diseases and small populations
Eva Budde, *Loukia Spineli, Anika Großhennig, Armin Koch*

P.55 Probabilistic Forecasts of Electricity Prices: A Funtional Data Approach
Franziska Schulz, *Brenda López Cabrera*

P.56 Randomization does not help much, comparability does
Uwe Saint-Mont

P.57 Regional health care performance in Europe: A metafrontier approach
Katharina Schley

P.58 Relationship between lung function and important PROs in COPD patients – early results from the COSYCONET study
Max Westphal, *Annika Karch, Armin Koch*

P.59 Seasonality of food poisoning with salmonella enteritidis in years 1999-2014, Poland
Aleksander Owczarek, *Ewa Jędrusik, Małgorzata Kowalska*

P.60 Sensitivity Analyses for Informative Censoring
Stefanie Gisela Marion Biedermann, *Panayiotis Bompotas, Alan Charles Kimber*

P.61 Simulated multi-pathogen infectious disease system including population level heterogeneity and dependence among pathogens
Abhishek Bakuli, *Frank Klawonn, Rafael Mikolajczyk*

P.62 Single-level and multilevel models to analyze binary response data: a comparative study
Nigatu Degu Terye, *Yonas Shuke Kitawa, Genanew Timerga Neri*

P.63 Smooth confidence intervals and a goodness of test for the survival function under random right censoring
Dimitris Ioannidis

P.64 Some comments on mixed model equations
Barbora Arendacka, *Simo Puntanen*

P.65 Some discrete modifications of the Benjamini-Hochberg procedure
Sebastian Doehler

P.66 Some properties of D-optimal designs
Małgorzata Graczyk

P.67 SPC methods for time-dependent processes of counts
Christian H. Weiß

P.68 Statistical investigation of the coefficient estimate describing the relationship between a composite score and binary endpoints
Evangelia Christodoulou, *Christina Bamia*

P.69 Testing for strict exogeneity in fixed-effects panel data models when both n and T are large.
Alexander Simon Mayer

P.70 The best number of standby redundancy for parallel $(2, n-2)$ system
Motahareh Parsa, *Hadi Jabbari, Jafar Ahmadi*

P.71 The value and the benefit of a new diagnostic test: Two perspectives to be distinguished
Werner Vach

P.72 Thoughts on the non-transitivity of certain nonparametric pairwise comparisons
Attila Dávid

P.73 Track descriptors - automated characterization of cell tracks
Manuel M. Nietert, Michael Haberl, Francesca Oboardi, Alexander Flügel, Franziska Linke, Dieter Kube, Julia Gross, M. Shariful Islam, Tim Beissbarth, Tim Friede

P.74 tSNR as Feature Selection Technique in SNP Data Analysis
Nazatulshima Binti Hassan

P.75 What are the determinants of the operational losses severity distribution? A multivariate analysis based on a semi-parametric approach
Julien Hambuckers, *Cédric Heuchenne, Olivier Lopez*

P.76 Zum Einfluss von soziodemografischen und Versorgungsstrukturen auf die tatsächliche medizinische Versorgung - Ein PLS-Modell unter Berücksichtigung räumlicher Abhängigkeiten
Jörg Betzin

Special Meetings / Committee Meetings

15.AG.1: AG Lehre
Time: Tuesday, March 15th, 12:00pm – 1:00pm
Location: ZHG, 004

15.AG.2: AG Nachwuchs
Time: Tuesday, March 15th, 12:00pm – 1:00pm
Location: ZHG, 104

15.AG.3: AG Datenanalyse und Numerische Klassifikation
Time: Tuesday, March 15th, 12:00pm – 1:00pm
Location: ZHG, 006

15.AG.4: AG Landwirtschaftliches Versuchwesen
Time: Tuesday, March 15th, 12:00pm – 1:00pm
Location: ZHG, 102

15.AG.5: AG Statistische Methoden in der Medizin/ AG Epidemiologische Metho-den in der Medizin
Time: Tuesday, March 15th, 12:00pm – 1:00pm
Location: ZHG, 101

15.6.GFKL: Mitgliederversammlung Gesellschaft für Klassifikation
Time: Tuesday, March 15th, 4:40pm – 6:00pm
Location: ZHG, 101

16.AG.1: AG Bayes Methodik
Time: Wednesday, March 16th, 12:00pm – 1:00pm
Location: ZHG, 101

16.AG.2: AG Statistische Methoden in der Epidemiologie
Time: Wednesday, March 16th, 12:00pm – 1:00pm
Location: ZHG, 104

16.AG.3: AG Populationsgenetik und Genomanalyse/ AG Genetische Epidemiologie/ AK Humangenetik der GMDS
Time: Wednesday, March 16th, 12:00pm – 1:00pm
Location: ZHG, 102

16.AG.4: AG Biostatistik
Time: Wednesday, March 16th, 12:00pm – 1:00pm
Location: ZHG, 105

16.AG.5: AG Nichtparametrische Methoden
Time: Wednesday, March 16th, 12:00pm – 1:00pm
Location: ZHG, 006

16.7.AG.1: AG Leiter Treffen
Time: Wednesday, March 16th, 6:00pm – 10:00pm
Location: ZHG, 105

17.AG.1: AG Ethik
Time: Thursday, March 17th, 12:00pm - 1:00pm
Location: ZHG, 101

17.AG.2: Editorial Board Biometrical Journal
Time: Thursday, March 17th, 12:00pm - 1:00pm
Location: ZHG, 102

17.6.IBS-DR: Mitgliederversammlung Internationale Biometrische Gesellschaft - Deutsche Region
Time: Thursday, March 17th, 4:40pm - 6:00pm
Location: ZHG, 009

Stimmabgabe Beiratswahl
Time: Thursday, March 17th, 9:00am - 4:00pm
Location: ZHG, ConfDesk, first floor

Awards

DAGStat Medal

Following the inaugural awarding of the DAGStat medal in Freiburg in 2013, the DAGStat again honors three fellows for their distinguished contribution to the field of statistics in Germany. This contribution can be in the scientific, educational, social, and administrative area but its impact must have been acknowledged by the statistical community in Germany. The award emphasizes the interdisciplinary commitment of the recipients.
Members of DAGStat's executive board present the DAGStat medal to the recipients as part of the conference dinner accompanied by an honorific speech highlighting the recipients' work.

The DAGStat Medal is awarded to:

Prof. Dr. Hans-Hermann Bock
Prof. Dr. Hans-Jürgen Läuter
Prof. Dr. Peter Wilrich

Award Session (IBS-DR & GfKl)

The German Region of the International Biometric Society (IBS-DR) awards the Bernd Streitberg Award and Gustav Adolf Lienert Award to promising students and young investigators for outstanding theses and publications in the field of biometry. The German Classification Society (GfKl) honors outstanding work of young talents with the best paper award.

The award session will take place on Wednesday, March 16, at 2.50 pm (009 ZHG).

Poster Awards

The DAGStat awards prizes to selected posters. A committee decides on successful candidates during the Poster Session on Wednesday, March 16. Winners of poster prizes will be announced at the message board at the conference office (room 1.140, first floor, ZHG). The award ceremony will be part of the closing session on Friday, March 18, 12pm (room ZHG, 011).

Social Program

Guided City Tour, including: "Sidereal moments of Mathematics - Gauß in Göttingen"

Time: Monday, March 14, 6 pm and 8 pm
Wednesday, March 16, 2 pm
Thursday, March 17, 2 pm
Costs: 4 €, Tours can be booked in English or German.
Meeting point: Starting point is next to the tourist information office, in front of the left entrance of the old town hall (Altes Rathaus).

Welcome Reception

Time: Tuesday, March 15, 7 am
Location: Wilhelmsplatz, "Alte Mensa"

The "alte Mensa" is a newly renovated event location of the Georg-August-University in the city center. Built as a theater it became in 1922 the first "Mensa" (students restaurant) in Germany. Light snacks and drinks are complimentary. Because of limited space, this event had to be pre-booked.

Poster & GfKl Reception

Time: Wednesday, March 16, 6 pm
Location: University Göttingen, "Foyer Zentrales Hörsaalgebäude" (ZHG)

To celebrate the 40th Annual Meeting of the German Classification Society (GfKl), the poster session is combined with a reception including drinks and snacks. The event is planned as an informal gathering.

Conference Dinner

Time: Thursday, March 17, 8 pm
Meeting point: The buses are leaving approximately at 7:30 pm at the tourist bus stop, in front of the train station. The trip is around 15 min. For the transfer back, buses are available at 10 pm, 11 pm and midnight.
Location: Nörten-Hardenberg, Burghotel Hardenberg
Costs: The price including bus transfer is 52 €. Drinks are not included.

Count von Hardenberg's estate[1] is located at the foot of the historic castle ruins with the "Gräflich von Hardenberg'schen Kornbrennerei" distillery nearby.

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[1]Homepage of the Count von Hardenberg's estate: `http://www.der-hardenberg.com/`

Acknowledgement

General Information A-Z

Accomodation

For a list of hotels and hostels, please visit:
http://www.uni-goettingen.de/en/501582.html

ATMs

Several ATMs are located in the city center and at the train station. On campus, next to the "Mensa's" main entrance, "Sparkasse" operates an ATM.

Badge

Upon registration at the desk, you will receive your badge and conference materials. You are kindly requested to wear your name badge during all events of the conference.

Bicycle renting

Bicycle rentals are located near the train station (http://www.marco-bikes.de/) and close to the campus (http://www.radomat.de/index.html).

Certificate of attendance

A certificate of attendance can be downloaded:
https://www.conftool.pro/dagstat2016/

Coffee breaks

Coffee, tea, and water for coffee breaks are included in the registration fee and will be served in the ZHG.

Conference materials

Upon registration, you receive a conference bag including program book, abstract book, badge, and vouchers.

Cultural activities

Göttingen is a lively university town with plenty of cafés and bars located in the historical center. With your conference bag you receive a voucher for a guided city tour which leads you to historic sites and tells interesting - sometimes bizarre-anecdotes of Göttingen's history.

Food and Drinks

Lunch is not included in the registration fee. Close to the conference venue you find two university café's and a canteen ("Zentralmensa") which also offer vegetarian and vegan meals. Vouchers can be purchased at the conference office.

Drinks at the welcome reception and the poster session are free of charge.

The price for the conference dinner includes food (buffet) but not drinks.

Language

Conference languages are English and German.

Message Board

A message board at the conference office will display announcements.

Conference desk

The conference office is located in room 1.140 on the first floor of the ZHG.

Organizing institution

Zentrum für Statistik
Platz der Göttinger Sieben 5
D-37073 Göttingen

Professuren für Statistik und Ökonometrie, Georg-August-Universität Göttingen

Local Organizing Committee:
Thomas Kneib
Helmut Herwartz
Dörte Dede
Henriette Irmer

Parking

There is generally no public parking space available on the university campus. However, if wheelchair accessible parking is required, please do get in touch with us.

Public Transport

Most places in Göttingen are within walking distance. It is only a 10-minute walk from the train station to the university's main campus and 5 minutes from campus to the city center. If your accommodation is a bit further away, you might consider using public transport. Closest bus stops to the conference venue are "Platz der Göttinger Sieben" (bus lines: 21, 22, 23, 31, 32, 62) and "Auditorium" (bus lines 41, 42, 91, 92).

Taxi

Telephone numbers of cab companies in Göttingen:

Göttinger-Funk-Taxi-Zentrale 0551-69300
Puk minicar 0551-484848
alpha Taxi Reza 0551-5007780
City Plus Taxi Göttingen 0551-34005
Kirchner 0551-7706350
Mein Taxi 0551-9996077
Night & Day Taxi 0551-782828
Taxi Blitz 0551 9997799
Taxi Schweizer 0551-61006

Tourist Information

Göttingen Tourismus e. V.
Altes Rathaus, Markt 9
37073 Göttingen

Venue

Zentrales Hörsaalgebäude (ZHG), Georg-August University Göttingen

Wheelchair access

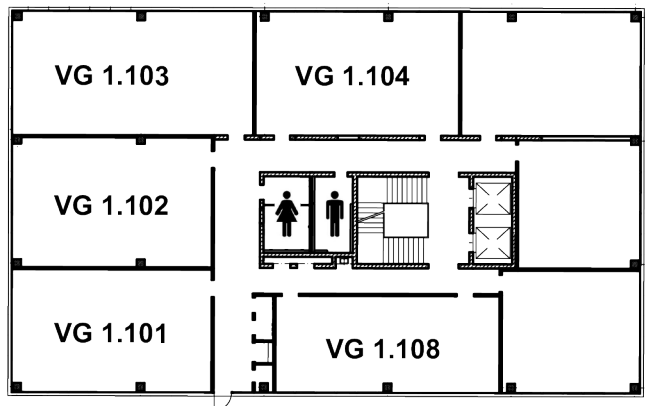All conference locations are wheelchair accessible.

Wi-Fi

The University of Göttingen is part of the eduroam network allowing you to use your home institution account. If you do not have an eduroam account, you were provided with a guest account upon registration.
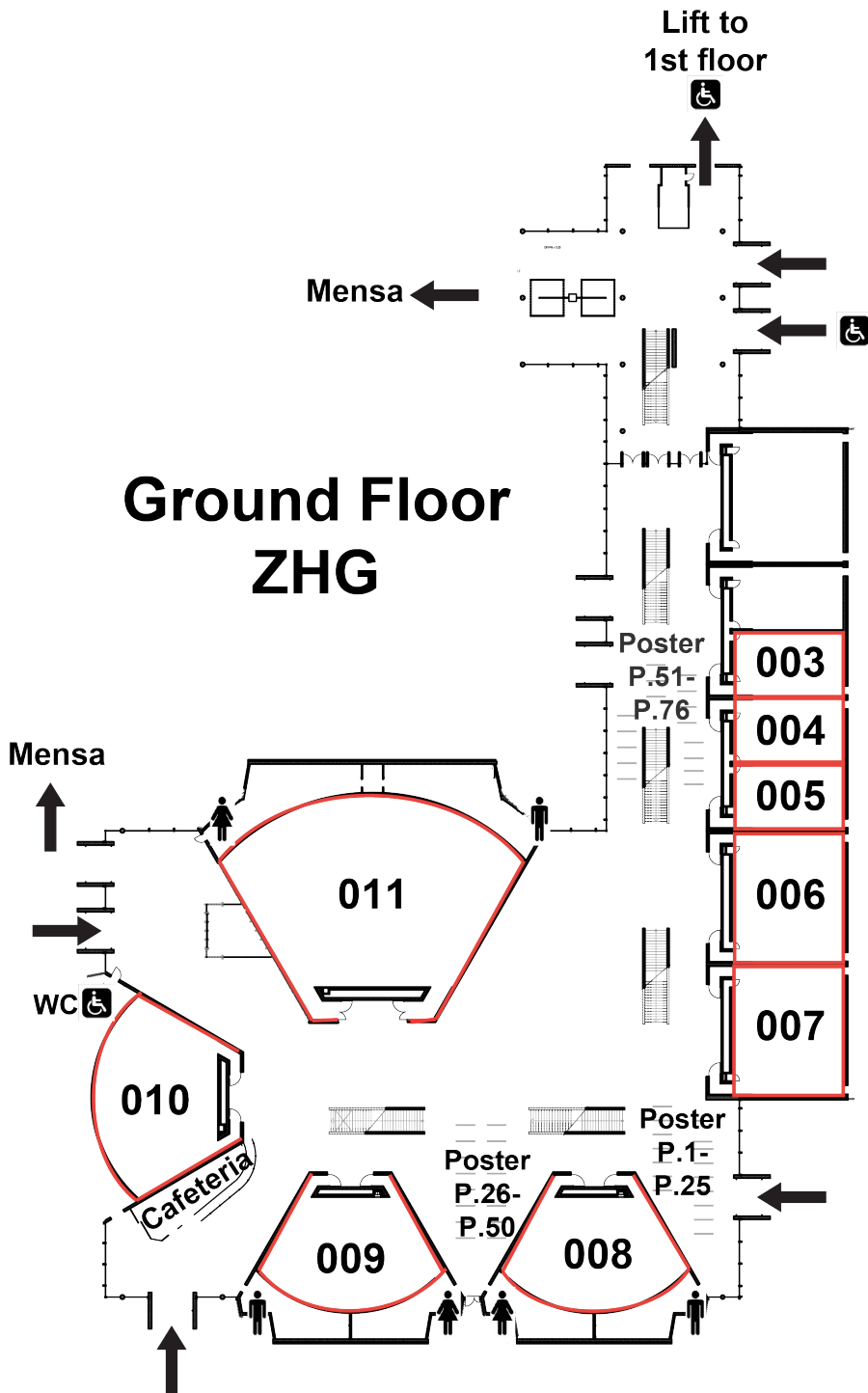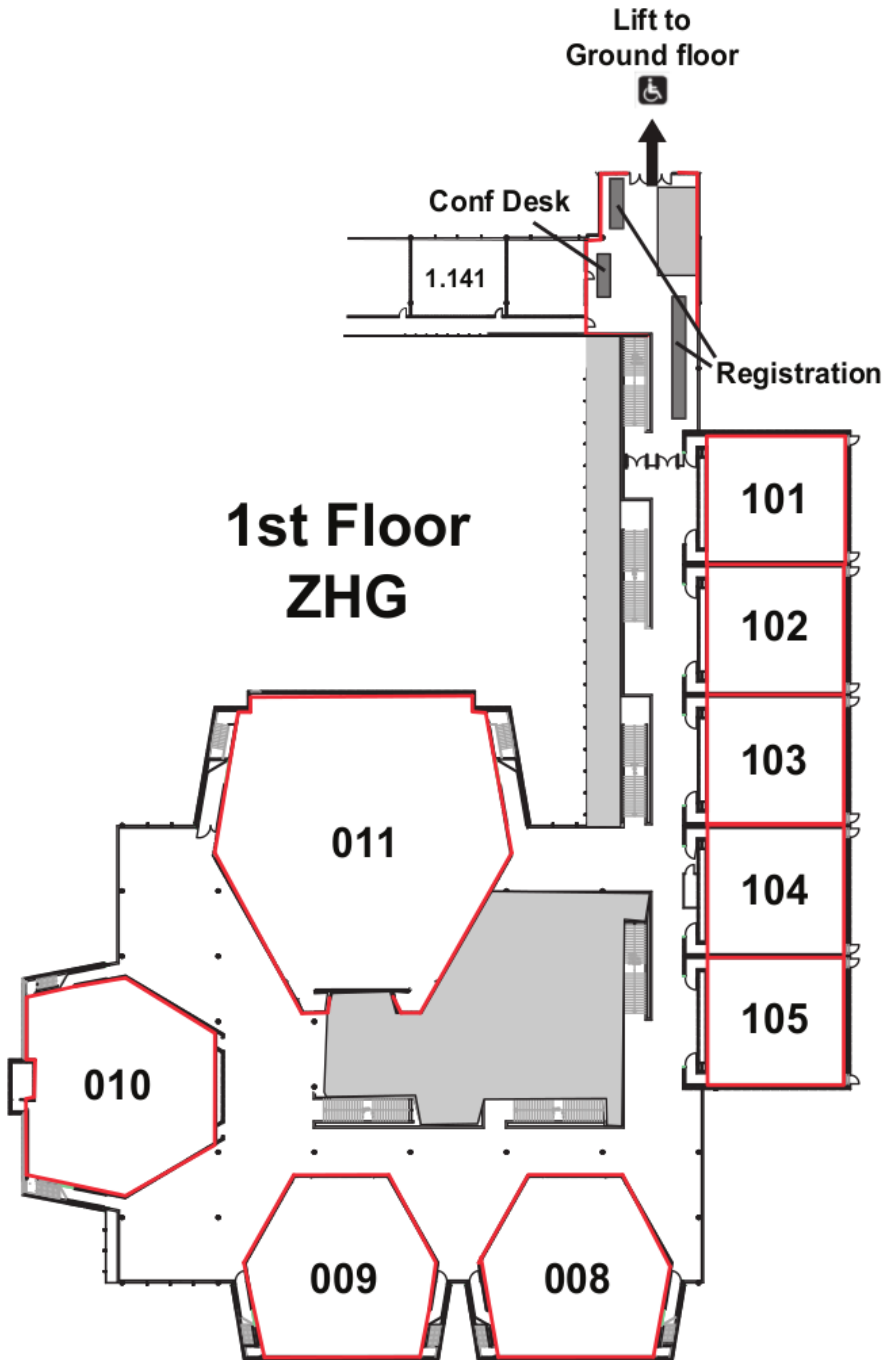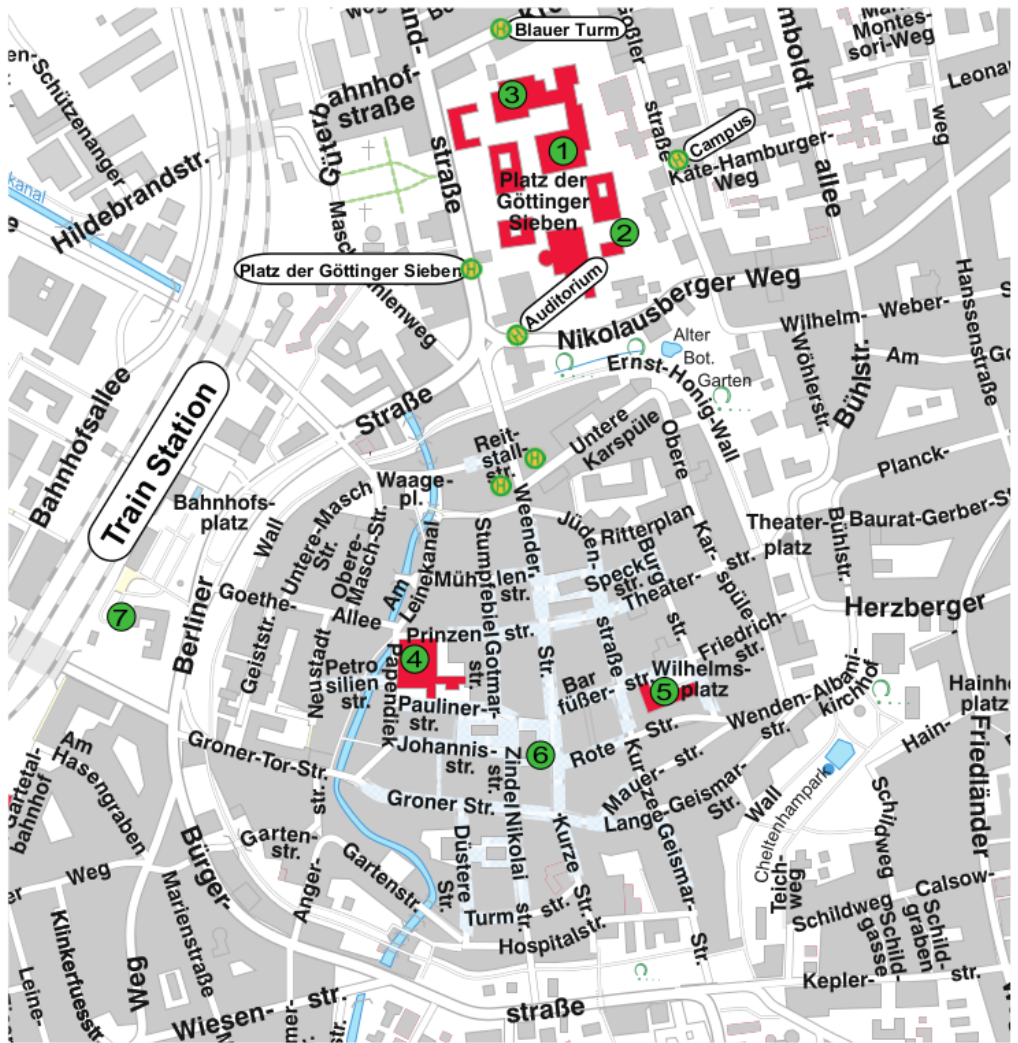
Zentralcampus (central campus)

Verfügungsgebäude (VG) 1st Floor

Entrance Ground Floor

Lift to
1st floor

Mensa

Ground Floor
ZHG

Mensa

Poster
P.51-
P.76

003
004
005
006
007

011

WC

010

Cafeteria

Poster
P.26-
P.50

Poster
P.1-
P.25

009   **008**

Lift to Ground floor

Conf Desk

1.141

Registration

1st Floor ZHG

011

010

009

008

101

102

103

104

105

①	**ZHG (Registration and Conference Venue)**
②	**VG (Tutorials and Lehrertag)**
③	**Zentralmensa (Main Refectory)**
④	**Paulinerkirche (public talk, in German)**
⑤	**Alte Mensa (Welcome Reception)**
⑥	**Meeting Point City Tour**
⑦	**Bus departure for Conference Dinner**
Ⓗ	**public bus stop**