

| MONDAY | Half-day course | Full-day course | Full-day course |
|-------------|---|--|--|
| 9:00-10:30 | Bayesian borrowing in clinical trials: design choices, assessment of operating characteristics and reporting Annette Kopp-Schneider, Silvia Calderazzo | An introduction to Bayesian non-parametrics for causal inference Michael Daniels, Jason Roy | A practical introduction to simulating complex trial designs Thomas Jaki, Dominique-Laurent Couturier, Pavel Mozgunov |
| 10:30-11:00 | Coffee break | Coffee break | Coffee break |
| 11:00-12:30 | Bayesian borrowing in clinical trials: design choices, assessment of operating characteristics and reporting Annette Kopp-Schneider, Silvia Calderazzo | An introduction to Bayesian non-parametrics for causal inference Michael Daniels, Jason Roy | A practical introduction to simulating complex trial designs Thomas Jaki, Dominique-Laurent Couturier, Pavel Mozgunov |
| 12:30-14:00 | LUNCH | LUNCH | LUNCH |
| 14:00-15:30 | | An introduction to Bayesian non-parametrics for causal inference Michael Daniels, Jason Roy | A practical introduction to simulating complex trial designs Thomas Jaki, Dominique-Laurent Couturier, Pavel Mozgunov |
| 15:30-16:00 | | Coffee break | Coffee break |
| 16:00-17:30 | | An introduction to Bayesian non-parametrics for causal inference Michael Daniels, Jason Roy | A practical introduction to simulating complex trial designs Thomas Jaki, Dominique-Laurent Couturier, Pavel Mozgunov |

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| TUESDAY 8:30-9:00 | Opening ceremony | | | | | | | | | | | | | | | | | |
| Early morning plenary: 9:00-10:00 | Keynote Simulation studies: bringing method to the madness | | Tim Morris | | | | | | | | | | | | | | | |
| Coffe break: 10:00-10:45 | Poster session | | | | | | | | | | | | | | | | | |
| Late morning parallel: 10:45-12:15 | IS1: Past and Future of Bayesian Biostatistics | | | TC1: 50th anniversary of the closed testing procedure | | | Censored data 1 | | | High dimensional data 1 | | | Statistical hypothesis testing 1 | | Other 2 | | | |
| | Bayesian Highs and Lows: A Pharma Industry Perspective | | Simon Wandel | Principles in Harmony: Closed Testing Meets the Partitioning and Projection Principle | | Werner Brannath | Overview of methods for planning studies with multiple time to event endpoints | | Ann-kathrin Ozga | Unraveling Aging in the CSF Proteome: A Systematic Comparison of Variable-Selection Methods for Protein Risk Score Modeling | | Sathish Kabatkar Ravindrath | Bootstrap calibration: A flexible tool to obtain (simultaneous) confidence and tolerance intervals | | Max Menssen | Nonparametric analysis of covariance in Mann-Whitney effects | | Konstantin Emil Thiel |
| | Bayesian approaches in time of ML and AI | | Katja Ickstadt | Multiple hypotheses testing in clinical trials beyond familywise error rate control | | Frank Bretz | The impact of the number and the size of clusters on prediction performance of the stratified and the conditional shared gamma frailty Cox proportional hazards models | | Daniele Giardiello | Detecting gene-environment interactions to guide personalized intervention: boosting distributional regression for polygenic scores | | Qiong Wu | Multiple-use prediction and calibration for all future values: exact simultaneous tolerance bands for regression | | Yang Han | Enabling Inference in Small Samples: Bayesian Estimation of Nonparametric Effects | | Levin Wiebelt |
| | Lessons learned in the last 25 years | | Gerhard Nehmiz | Closed Testing, Interim Analysis and Adaptations – History, Methods, and Modern Challenges | | Franz König | Evaluating Statistical Methods for Multiple Time-to-Event Endpoints: A Simulation Study on Recurrent and Competing Events | | Duoerkongjian g Alidan | A Nested Cross-Validation Framework for Leakage-Free Calibration of Adaptive Elastic-Net Regression in High-Dimensional Data | | Gul Inan | Minimum area confidence set optimality for simultaneous confidence bands for percentiles with applications to drug shelf-life estimation | | Lingjiao Wang | A New Approach to the Nonparametric Behrens-Fisher Problem with Compatible Confidence Intervals | | Stephen Schüürhuis |
| | Discussant | | | The invention of the closed testing procedure and early developments | | Markus Neuhäuser | Prognostic Models for Recurrent Event Data | | Victoria Watson | Regularized Multi-Omics Regression Modelling for Transcriptomic-Proteomic Integration in Mice with induced liver Damage. | | Ngoune Domo Brunel Darwin | Detecting day-to-day effects in concentration-response experiments in toxicology | | Julia Eichhorn | Graph-theoretic determinants of causal discovery performance in feedback-driven biological networks | | Markus Schepers |
| | | | Reinhard Vonthein | Graphical Approaches for Transparent Closed Testing | | Martin Posch | Unsure about the Markov assumption? A comparison of transition probability estimators in multi-state models | | Merle Munko | StabCell: A stability-selection framework with error control for clustering and differential expression analysis of scRNA-seq data | | Niklas Lück | Choice of the hypothesis matrix for usual quadratic forms | | Paavo Sattler | The Chicken or The Egg? Causal Inference Methods for Cross-Lagged Effects in Longitudinal Panel Data | | Tanya Toluay |
| LUNCH: 12:15-13:45 | | | | | | | | | | | | | | | | | | |
| Early afternoon parallel: 13:45-15:15 | IS2: Multiple tests beyond parametric assumptions | | | TC2: Interpretable Bayesian modelling of high-dimensional / complex problems in molecular biomedicine | | | Censored data 2 | | | Machine learning and data science 1 | | | Statistical hypothesis testing 2 | | Statistical modelling 1 | | | |
| | Multiple Comparison Procedures for Simultaneous Inference in General Factorial Design for Multivariate Functional Data | | Łukasz Smaga | Probabilistic Variable Importance: A Bayesian Perspective on Interpretable Machine Learning | | Christian Staerk | mRNA COVID-19 vaccination in pregnancy and risk of pregnancy loss: a progressive multistate model to account for time-dependent exposure | | Lukas Lohse | Identifying Post-COVID Risk Factors with Model-Agnostic Feature Importance | | Lukas Burk | Test of independence in a three-level model | | Anna Szczepańska-Alvarez | The effect of attentional control on postural stability in young and older adults | | Jakub Malik |

WEDNESDAY

Early morning plenary: 9:00-10:00

Keynote
Optimal design and Analysis in cytotoxicity experiments — Bridging the gap between statistics and toxicology
Kirsten Schorning

Coffe break:

10:00-10:45

Poster session

Late morning parallel:

10:45-12:15

IS4: Questions of Experimental Design and Statistical Analysis in Preclinical Research

YSS1 (ROeS)

Censored data 3

High dimensional data 2

Methods in epidemiology 1

Statistical modelling 2

From design to decision: A case study in preclinical pooled CRISPR demonstrating statistical opportunity

Natasha Karp

Navigating Multiplicity in Multiverse Analyses: A Simulation Study and Case Application to Lung Cancer Staging Using SEER Data

Gloria Brigiari

Inference in pseudo-observation-based regression using (biased) covariance estimation and naive bootstrapping

Simon Mack

Individuality and information content of infrared molecular profiles: insights from a large longitudinal health-profiling study

Kosmas Kepesidis

Inferring the causal effect direction in genetic association studies: An application to broad depression, obesity, and asthma

Sharon Lutz

Comparison of statistical methods for dealing with deviations in concentration-response curves

Huiying Zhou

Optimizing Preclinical Research: Sample Size Planning and Sequential Designs

Frank Konietschke

Modeling Antibody Kinetics in Pregnant and Lactating Women Following COVID-19 and Tdap Vaccination

Lukas Frank Buchhäusl

Evaluating selective-inference methods for Lasso in survival analysis: a comparative simulation study

Lena Schemet

Statistical basis for precision screening with infrared molecular fingerprints: functional data decomposition and lung cancer signals

Lea Gigou

Methodological and Practical Challenges in Developing a Cardiac Allocation Score

Leonie Lenz-Seraphin

A comparison of variable selection approaches for spline regression

Franziska Kappenberg

Statistical Planning and Reporting for Multi-Laboratory Preclinical Trials

María Arroyo Araujo

Edgington's Method for Random-Effects Meta-Analysis

David Kronthaler

Evaluation of Joint Models and Related Approaches for Long-Term Risk Prediction from Short-Term Data

Moritz Madern

Integrative Prediction Models for Multi-Omics Data with Missing Modalities

Marina Bleskina

Timeliness of Polio Vaccination during 2019-21 in India: A finite mixture modeling analysis

Sumit Kumar Das

A Clustered-Metric Simulation Study Comparing Flexible Regression Techniques for Non-Linear Associations

Theresa Ullmann

The Experimental Unit Information Index: Balancing Evidentiary Value and Sample Size of Adaptive Designs

Leonhard Held

Evaluation of cancer screening programmes: integration of the biological tumour growth model into the MOCCI method

Ema Požek

Comparing variable selection in Cox and accelerated failure time models: noncollapsibility, the phantom hazard

Lorena Hafermann

Inference for Functional Matched Pairs Designs with Missingness

Marléne Baumeister

Advancing mixed-effects random forests to predict BMI development in children and adolescents based on multi-cohort data

Jiumeng Zhang

Detection of changes in time series of preclinical measurements for selecting Virtual Control Groups

Wiebke Dammann

Comparative Analysis of Classification Models for Pharmaceutical Permeability Prediction

Jana Habus-Korbar

Informative Subsampling via Optimal Design for Efficient Training on Large and High-Dimensional Genomic Data

Subhadra Dasgupta

Estimating prevalence of micronutrient deficiency across multiple biomarkers: Approaches for generalized linear and linear mixed models

Steffen Hadasch

Limitations and Challenges of Mixed Models Repeated Measures (MMRM) Analysis

Moses Mwangi

LUNCH:

12:15-13:45

Early afternoon parallel:

13:45-15:15

IS5: Navigating in murky waters: reproducing preclinical findings

YSS2 (PL & D)

Clinical trials 2

Machine learning and data science 3

Methods in epidemiology 2

Other 3

Reproducibility and Ethics in Nonclinical Statistics: Building Trust

Helena Geys

Hypothesis Testing in Ill-Conditioned Functional Response Models

Natalia Stefańska

A systematic empirical comparison of different statistical approaches for a multi- aspect analysis of clinical trial data in rare diseases

Martin Geroldingerr

A Comprehensive Comparison of Methods for Quantifying Similarity of Datasets

Marieke Stolte

Detection of Measurement Errors and Heterogeneity During the Collection of Observational Data: A Simulation Study

Ronja Foraita

Feasibility of Photoplethysmography for Heart Rate Asymmetry Assessment: A Comparative Study using the Autonomic Aging Database

Rafał Pawłowski

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| | The Impact of Methodological Rigor on Reproducibility in Biomedical Research | Ulf Toelch | missKnockoffs: A Robust Approach to Variable Selection in Incomplete Omics Data under False Discovery Control | Dominik Nowakowski | Assessing covariate-adjusted risk differences in small-sample trials: A comparative evaluation of statistical methods | Martin Schnuerch | A New Approach to Distinctness Testing | Laura Slebioda | Detecting Temporal Measurement Heterogeneity in Cohort Studies: Lessons from the Study of Health in Pomerania | Carsten Schmidt | Assessing the Reliability of Virtual Control Groups in Preclinical Toxicology | Timur Tug |
| | Planning animal experiments based on estimation error considerations | Dario Zocholl | Conditional distribution function-based measure for independence testing of functional data. | Filip Pieczętkiewicz | Allocation Bias in Rare Diseases Clinical Trials with Multiple Endpoints | Stefanie Schoenen | Predicting mixture of experts performance by generalized estimating equations | Małgorzata Ćwiklińska-Jurkowska | Navigating Complexities in Assessing Systemic Health Effects of Tattoos in a Population-Based Cohort | Narges Ghoreishi | Modeling data with values above the upper limit of quantitation | Hannesfriedrich Ulbrich |
| | Sample Size Minimisation in Preclinical Animal Trials | Nicole Ellenbach | Combining machine learning methods for subgroup identification in time-to-event data with approximate Bayesian computation for bias correction | Henrik Stahl | When randomization is not random: Allocation bias in small sample, group sequential randomized clinical trials | Daniel Bodden | Predicting Ordinal Outcome Using Interpretable Artificial Representative Tree with Conformal Uncertainty Quantification | Lea Louisa Kronziel | Beyond Case Counts: Simulation Evidence for Probability-Based Pandemic Surveillance | Inken Siems | Consideration of missing values in sample size calculation using multiple imputation | Teresa Byczkowski |
| | | | Estimating the Causal Effect of a Cumulative Exposure on an Outcome in Studies Prone to Confounding and Irregular Visits | Mathilde Dicaire-Cartier | Multiple Treatment Arms, Multiple Biases? Allocation and chronological biases in platform trials | Nico Bruder | modgo 2.0: an R package for synthetic data generation to mimic original study data | Andreas Ziegler | Generalizability of a self-supervised wrist model for physical behaviour classification to hip-worn data via fine-tuning on paired free-living data from the WEALTH study | Christoph Buck | | |
| | | | Variable Selection in Meta-Regression with Suspected Interaction Effects | Paula Lorenz | | | | | | | | |

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| Late afternoon parallel | No sessions |
| 16:00-19:00 | Annual German Region Meeting |
| 16:00-19:00 | Excursions |
| 19:00-22:00 | Gala dinner |

IS: invited session
TC: topic-contributed session
YSS: Young-statisticians session

THURSDAY
Early morning plenary: 9:00-10:00

Keynote
Causal inference in practice – One (?) estimand, many (!) analytical decisions
Susanne Strohmaier

Coffe break: 10:00-10:45

Poster session

Late morning parallel: 10:45-12:15

IS6: Big Data in Biomedicine: Innovations Across Imaging and Omics

TC4: Biometrics in the era of AI

Clinical trials 3

Ecological and agricultural statistics 1

Evidence synthesis 1

Methods for diagnostics studies 1

Functional Data Analysis of Head Impact Exposure of College Football Athletes

Jaroslav Harezlak

On the Role of Biometry in AI Projects

Björn-hergen Laabs

A randomized basket trial design for dose optimization based on Bayesian model averaging using spike-and-slab priors

Belay Birlie Yimer

Clustering of indicator species according to soil properties in the regeneration phase of pedunculate oak (Quercus robur L.) forests

Anamarija Jazbec

Parametric nonlinear dose-response meta regression

Christian Ritz

Strategies for dealing with outliers in (semi-)parametric estimation of reference intervals and standard deviation scores

Andreas Gleiss

Quantile regression in genomics: a new lens for genetic discovery and phenotype prediction

Iuliana Ionita-Laza

ChatGPT as a Tool for Biostatisticians

Dennis Dobler

A Basket Trial Design for Unequal Sample Sizes Based on Power Priors

Lukas Baumann

Quality over Quantity? - The optimised allocation of quality samples in Bavarian post-registration trials in perennial ryegrass

Anne-katrin Gorn

Meta-analyses based on previous meta-analyses

Christian Röver

A Novel Approach to Diagnostic Evaluation: Prevalence-Corrected Precision-Recall Curves

Ilker Unal

Degradation Graphs Reveal Hidden Proteolytic Activity in Peptidomes

Jonas Wallin

Teaching Biostatistics in Times of AI

Ursula Berger

How to optimize dynamic borrowing in basket trials – A utility-based framework.

Lukas D Sauer

Challenges and Perspectives on Using Environmental Covariates in Multi Environment Trials A Case Study in Sugar Beet

Maksym Hrachov

Proper Back-Transformations for the Random-Effects Model in Meta-Analysis

Jan-bernd Igelmann

Covariate adjustment, factorial designs and clustered data in diagnostic accuracy studies

Philipp Weber

Relative quantification of proteins with shared peptides: a weight-based approach

Mateusz Staniak

Panel discussion

Panel discussion

“AI-Assisted Methodology Validation Before Data Collection: The E-PICOS Framework for Robust Clinical Trials”
Using Confidence Distributions in Final and Interim Analyses for Single-Arm Studies or Platform Trials Consisting of Single-Arm Studies

Arzu Kanik

Optimizing the allocation of trials to sub-regions in crop variety testing: different conditions in different years

Maryna Prus

Bayesian conjugate analysis for federated statistical inference

Peter Degen

Enhancing Efficiency in Cancer Drug Testing using Nonparametric Approaches

Sunil Mathur

LUNCH: 12:15-13:45

Early afternoon parallel: 13:45-15:15

IS7: Methods to improve the practical usefulness of biomedical research

TC5: Statistical issues in health care provider comparisons

Clinical trials 4

High dimensional data 3

Other 1

Missing data 1

Systematic Review and Meta-analysis of Animal Studies as Tools for Strengthening Research Integrity

Kimberley Wever

Causal Inference for Healthcare Profiling in Low-Event Settings

Sharon-lise Normand

Difference-in-difference estimators in randomized trials with external controls

Christiana Drake

Integrating functional motif discovery and statistical learning approaches for advanced blood glucose prediction in real-world conditions

Sara Garber

Statistical methods to reduce Selection Bias in Dose-Finding Studies with Binary Endpoints

Alexandra Balzer

Prediction in the presence of missing values. Are there credible alternatives to imputation-based use of the predictive density?

Bart Mertens

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| | Quality assessment of proposals for animal studies and corresponding publications | Florian Frommlet | Measuring performance for end-of-life care | Sebastien Haneuse | Evidence Generation Using External Controls: Opportunities and Challenges – A Regulator’s Perspective | Armin Schüler | Statistical end-to-end analysis of large-scale microbial growth data with DGrowthR | Medina Feldl | Comparison of ANOVA methods for experiments in the nested block design | Konrad Banaś | Impact of imputation on individual cough alert system with incomplete baseline monitoring | Dörte Huscher |
| | From the Classroom to the Clinic: Teaching Reproducibility in Statistics Education | Samuel Pawel | Timely yearly assessment of follow-up outcomes using a period-based survival data approach | Lisa Steyer | Bayesian Methods Integrating Causal Inference Approaches for Borrowing Historical Control Data in RCTs: A Neutral Comparison Study | David Jesse | Population Matching to Enhance Back-Translation Between Clinical Trials and Biobank Data for Drug Target Discovery | Han Chang Chiam | Rectangular augmented row-column designs generated from contractions | Hans-peter Piepho | The performance paradox: understanding the discrepancy between the performance of imputation approaches for survival models with missing covariates in simulation studies and real data | Edouard F. Bonneville |
| | Discussant | Ulrich Dirnagl | Improved predictions of quality of care indicators in the tail of its distribution | Els Goetghebeur | Identification of subtrial-specific optimal biological dose (OBD) with robust borrowing of information | Zhi Cao | Entropy Adjusted Graphical Lasso for Sparse Precision Matrix Estimation | Vahe Avagyan | Effect of using textbook field plans without randomization | Jens Hartung | Handling Missing Data in Life Science: A Comparative Study of Imputation Methods for Medical Data. | Maria Thurow |
| | | | Comparing the usefulness of patient and clinician reported outcomes measures to compare providers of arthroscopic rotator cuff repair – Methodological considerations | Werner Vach | | | | | Socio-spatial characterization of sub-sewersheds for wastewater-based epidemiology: Developing and evaluating two estimators for population-related variables | Yassine Talleb | Evaluating the Impact of Missing Data Imputation Methods on Bias and Covariate Balance in Propensity Score Analysis: A Simulation Study | Saghar Garayemi |
| Coffe break: 15:15-15:45 | | | | | | | | | | | | |
| Late afternoon parallel: 15:45-17:15 | IS8: Regularization methods and their applications in the work of IQWiG and IQTIG | | TC6: Bridges and Barriers: Career Moves Between Industry and Academia | | Clinical trials 5 | | | Machine learning and data science 4 | | Open and reproducible research 1 | | |
| | Regularization methods in clinical biostatistics: State-of-the-art and possibilities for improvement | Sarah Friedrich-Welz | Panel discussion | Panel discussion | Assessment of Global Evidence Against Homogeneity for Exhaustive Subgroup Treatment Effect Plots | Björn Bornkamp | Generative Adversarial Networks For Mortality Modelling | Łukasz Głąb | Addressing the researchers' degree of freedom using multiple marginal models | Anne-laure Boulesteix | | |
| | The Firth correction - a recap | Georg Heinze | | | Comparing adverse event probabilities in a hypothetical world without consent withdrawals or treatment switches | Judith Vilsmeier | Lesion Network Mapping based Convolutional Neural Networks: Predictive Performance and Interpretability | Matthias Becher | OMOP ETL Pipeline Implementation for Tuberculosis Data Standardisation at Douala General Hospital, Cameroon | Brenda Yankam Mbouamba | | |
| | Regularization methods in the evaluation of hospital quality | Jona Cederbaum | | | Counterfactual Uncertainty Quantification in Personalized Medicine: A Statistical Framework for RCTs | Xingya Wang | Deep Learning Strategies for Rare and Common Brain Disease Diagnostics from Medical Imaging | Anna Mamchych | Living Synthetic Benchmarks: A Neutral and Cumulative Framework for Simulation Studies | František Bartoš | | |
| | Regularization methods in clinical biostatistics: Evaluation of adverse events in early benefit assessment using Firth correction for Cox models in the case of zero events | Lars Beckmann | | | Continuous Monitoring in Early Phase Oncology: A Standardized, Patient-Centric Approach | Kuzko Aleksandra | From Data to Decisions: Enhancing the Reliability of Random Forest Predictions with optRF | Thomas Martin Lange | How many subgroup analyses are false (-positives or negatives)? – Evidence from p-value distributions of interaction tests and mixture models in diabetes research | Oliver Kuss | | |
| | | | | | Blinded continuous monitoring for continuous outcomes | Longhao Xu | Calibrating machine learning approaches for probability estimation in case of the absence of calibration data | Eleonora Di Carluccio | Improving clinical and methodological research in the health sciences – on the crucial role of reporting guidelines and structured reporting | Willi Sauerbrei | | |
| 17:30-18:00 Closing ceremony | | | | | | | | | | | | |
| IS: invited session; TC: topic-contributed session | | | | | | | | | | | | |