

DAGStat 2022 Statistics under one umbrella

6TH JOINT STATISTICAL MEETING March 28 – April 1, 2022, UKE Hamburg

MIND THE GAP – INTERPLAY BETWEEN THEORY AND PRACTICE



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Welcome

Dear participants,

Due to the Corona pandemic, it was uncertain for a long time whether the sixth joint statistical meeting could take place as a face-to-face meeting. For many of us, this will be the first conference in presence after two years of meeting only online due to SARS-CoV-2 and COVID-19. Given the uncertainties, we are glad to welcoming you in Hamburg! As a lesson learned from the pandemic, this DAGStat conference, for the first time in its history, also facilitates online participation in live streams and selected hybrid sessions.

Starting in 2010, the DAGStat conferences are held every three years and are well established by now. Previous conferences at Bielefeld, Dortmund, Freiburg, Göttingen and Munich used the theme "Statistik unter einem Dach", which translates to "statistics under one umbrella". This conference in Hamburg continues this tradition but with an additional subtitle. "Mind the gap – interplay between theory and practice" highlights that theoretical development of statistical methods and their practical applications should go hand in hand.

The DAGStat has fourteen members, thirteen professional and learned societies as well as the Federal Statistical Office of Germany. For three of our members, this conference includes their annual meetings. These are the 68th "Biometrisches Kolloquium" of the German Region of the International Biometric Society (IBS-DR), the "Spring Meeting of the Deutsche Statistische Gesellschaft (DStatG)" and the 45th Annual Conference of the Gesellschaft für Klassifikation (GfKI) – Data Science Society.

The sixth joint statistical meeting takes place at the University Hospital Hamburg-Eppendorf (UKE) from March 28 to April 1, 2022. We are extremely grateful to the local organizers, especially Antonia Zapf (UKE), Sven Knoth (Helmut-Schmidt-University) and Martin Spieß (University of Hamburg). Supported by their teams, they organized this conference under very difficult, unprecedented circumstances. This was possible by an amazing collaboration across three major higher education institutions in Hamburg.

As previous joint statistical meetings, DAGStat 2022 in Hamburg provides a forum for statisticians from various backgrounds and fields of application including econometrics, biostatistics, official statistics and mathematics to name just a few. Given the experiences during the pandemic over the past two years, we might be closer as a profession than ever before. However, it has also become apparent that statistics as a

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discipline does not receive the attention and recognition it deserves. We should also use the conference to critically reflect on the past two years and to make plans for a brighter future for statistics as a discipline and statisticians as a profession.

Welcome to Hamburg and enjoy DAGStat 2022!

Tim Friede Chair of the DAGStat

Ralf Münnich President of the DStatG

Annette Kopp-Schneider President of the IBS-DR

Adalbert Wilhelm Chair of the GfKl Data Science Society Dear colleagues and friends,

On behalf of the local organizing committee, it is a pleasure to welcome you all to the sixth joint statistical meeting of the German Consortium for Statistics (Deutsche Arbeitsgemeinschaft Statistik, DAGStat) hosted at the University Medical Center Hamburg-Eppendorf (Universitätsklinikum Hamburg-Eppendorf, UKE) in close cooperation with the Universität Hamburg (UHH) and the Helmut-Schmidt-Universität/Universität der Bundeswehr Hamburg (HSU), from March 28 to April 1, 2022.

After five successful joint statistical DAGStat conferences - Bielefeld (2007), Dortmund (2010), Freiburg (2013), Göttingen (2016) and München (2019) - we are happy and proud to be able to organize and hold the 2022 conference in Hamburg. Especially since it was not clear until a few weeks ago, in what format the conference could take place.

Therefore, we are all the more pleased that, in addition to an online option, the conference can take place in person, although on a smaller scale than originally planned due to the Corona regulations.

The timing for a DAGStat conference in Hamburg could not have been better: The three institutions UKE, UHH and HSU are planning to set up a master program in statistics for students with a Bachelor degrees from various fields. This is, of course, not a revolutionary idea - statistics programs already exist at many universities - but given the increasing need for curation of data collections, analyses and interpretation in an ever growing number of fields, the number of such programs is still surprisingly small in Germany.

The increasing demand for data management goes hand in hand with an increasing digitization of data collection, leading to an explosion in the number of data sets and their sizes. At the same time, many methods and techniques to handle these data sets have been proposed - keywords include machine learning, artificial intelligence and neural networks - and various research and teaching programs were developed - keywords including data science and data literacy. On the one hand, computer science plays an increasingly important role in addition to (applied) mathematics. On the other hand, the fields of application are expanding. However, these exciting developments carry the risk of a diverging field where fruitful discussions between areas "theoretical foundations", "technical developments" and "applications" are becoming increasingly rare.

An important goal of the DAGStat conference was to stop the divergence and to stimulate constructive discussions between the representatives of the various areas. Accordingly, the central theme of the DAGStat conferences was and still is "Statistics under one umbrella" for the 2022 conference, which we complement by the theme "Mind the gap - Interplay between theory and practice".

Of course, organizing this conference could not have been possible without the help of so many colleagues and friends. Hence, we thank the numerous members of the scientific committee for bringing together more than 200 presentations and excellent invited speakers. We also acknowledge financial support from the Deutsche Forschungsgemeinschaft (DFG) as well as from the Universität Hamburg and the Faculty of Psychology and Human Movement Science of the Universität Hamburg. Special thanks go to many collaborators from the UKE, UHH and HSU who helped organizing the conference.

In closing, we wish you an enjoyable, memorable, and productive time at the DAGStat 2022 at the UKE in Hamburg.

Chairs of the Local Organizing Committee

Sven Knoth	Helmut Schmidt University Hamburg (HSU)
Martin Spieß	Universität Hamburg (UHH)
Antonia Zapf	University Medical Center Hamburg-Eppendorf (UKE)

Members of the Local Organization Committee

Heiko Becher	(UKE)	Sven Knoth	(HSU)
Brigitte Deest	(UHH)	Denise Köster	(UKE)
Marcella Dudley	(UHH)	Sandra Kümmelberg	(UKE)
Jan Gertheiss	(HSU)	Annika Möhl	(UKE)
Annika Gropper	(UKE)	Ann-Kathrin Ozga	(UKE)
Andrea Großer	(UKE)	Martin Spieß	(UHH)
Petra Hasselberg	(UKE)	Martin Spindler	(UHH)
Alexandra Höller	(UKE)	Katharina Stahlmann	(UKE)
Anja Holz	(UKE)	Michael Supplieth	(UKE)
Martin Jann	(UHH)	Mathias Trabs	(UHH)
Arne Johannssen	(UHH)	Antonia Zapf	(UKE)

Conference Organizers

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

- deENBIS European Network for Buisness and Industrial Statistics Deutsche Sektion
- **DESTATIS** Statistisches Bundesamt
- AG Statistische Methoden in der Epidemiologie der Deutschen Gesellschaft für Epidemiologie (DGEpi) e.V.
- **DStatG** Deutsche Statistische Gesellschaft
- Sektion Methoden der Politikwissenschaft der Deutschen Vereinigung für Politikwissenschaft (DVPW)
- DMV-Fachgruppe Stochastik e.V. der Deutschen Mathematiker-Vereinigung
- **GfKI** Gesellschaft für Klassifikation e.V.
- gmds Deutsche Gesellschaft für Medizinische Informatik, Biometrie und Epidemiologie e.V.
- IBS-DR Deutsche Region der Internationalen Biometrischen Gesellschaft
- Fachgruppe Methoden und Evaluation der Deutschen Gesellschaft für Psychologie (DGPs)
- Sektion Methoden der Empirischen Sozialforschung der Deutschen Gesellschaft für Soziologie (DGS)
- VDSt Verband Deutscher Städtestatistiker
- Verein zur Förderung des schulischen Stochastikunterrichts e.V.
- Ausschuss Ökonometrie im Verein für Sozialpolitik e.V.

Scientific Committee

Chair:

Tim Friede

University Medical Center Göttingen

Committee:

Sigrid Behr	Novartis, Basel
Tim Beißbarth	Georg-August-Universität Göttingen
Rolf Biehler	Universität Paderborn
Hartmut Bömermann	Amt für Statistik, Berlin-Brandenburg
Werner Brannath	Universität Bremen
Hanna Brenzel	Statistisches Bundesamt (Destatis)
Sarah Friedrich	Universität Augsburg
Heinz Holling	Heinz Holling
Hajo Holzmann	Philipps-Universität, Marburg
Katja Ickstadt	TU Dortmund
Hans Kestler	Universität Ulm
Sven Knoth	Local Organizer, Helmut Schmidt University Hamburg
Sonja Kuhnt	Fachhochschule Dortmund
Heinz Leitgöb	Katholische Universität Eichstätt-Ingolstadt
Ralf Münnich	Universität Trier
Friederike Paetz	TU Clausthal
Markus Pauly	TU Dortmund
Wolfgang Schmid	Europa Universität Viadrina, Frankfurt Oder
Kilian Seng	Zeppelin Universität Friedrichshafen
Martin Spieß	Local Organizer, Universität Hamburg
Adalbert Wilhelm	Jacobs-University Bremen
Antonia Zapf	<i>Local Organizer,</i> University Medical Center Hamburg- Eppendorf

Hygiene protection concept for on-site participants

There is a complete hygiene protection concept that is coordinated with the responsible health authority and that is binding. This can be found on the conference website. An abbreviated English version is provided below. Please note that these are the regulations at the time of printing and may change before the conference. The current regulations and further details can be found on the website.

For a detailed definition of full immunization and recovery status see <u>https://www.hamburg.de/coronavirus/15762772/2022-01-06-sozialbehoerde-corona-2g-plus-regelung/</u> (in German).

2G plus regulation

This means persons who recovered from COVID-19 or fully vaccinated persons are admitted if they can also present a negative test result. Participants with a booster vaccination do not need a corona test.

- The meeting without daily testing can be attended by those who have been vaccinated three times or vaccinated twice and had a prior infection once (the order does not matter).
- At the meeting with daily test may participate who is twice vaccinated, once vaccinated and prior infected or twice recovered.
- Those who can provide proof of recovery are considered to have recovered if the first positive PCR test was at least 28 days ago and no more than 90 days ago.
- Participants who do not need a test will receive an admission bracelet at the beginning of the meeting, which is valid as 2G+ "proof" for the duration of the meeting.
- Participants who need a daily test will also receive an admission bracelet, which is valid only for that day.
- The certificates of vaccination or convalescence status, as well as the test certificates are to be carried in digital or analogue form (exception see above).
- Only official tests are accepted, no self-tests or similar.

Hygiene rules

- Any physical contact with each other has to be avoided.
- A minimum distance to other participants of 1.5 m is to be kept during the entire conference. This also leads to a limited number of participants per lecture hall.
- Pay attention to hygiene (coughing and sneezing rules, hand hygiene, do not touch your face).
- FFP2 masks must be worn on the premises of the UKE.
- For better tracking of infections, the Corona warning app should be used (https://www.bundesregierung.de/breg-de/themen/corona-warn-app).
- If there are signs of infection (e.g. fever, dry cough, breathing problems, loss of sense of smell/taste, sore throat, aching limbs), do not attend the conference, even if the antigene test result is negative.
- Hand sanitizer will be provided at each entry and exit.

Catering

- Snacks during the coffee breaks, lunch bags during the lunch breaks and drinks throughout the day will be distributed to participants at the lecture halls and at the Erika-Haus.
- Distance rules must also be followed during coffee and lunch breaks.

Social program

- During the conference dinner the local hygiene regulations have to be followed.
- The hygiene rules of the city of Hamburg apply to the guided tours: <u>https://www.heute-stadtfuehrung.hamburg/corona-virus/</u> (in German).

Online Participation

The entire scientific program from Tuesday to Friday will be streamed online via Zoom. There will be one Zoom link per lecture hall, which will remain the same for the entire conference. The link to the Zoom conferences will be made available via the website shortly before the conference (password protected) and must not be passed on to others. During and after the talks, questions or comments can be posted in the chat, which will then be brought into the discussion by the moderator on-site. Information on data protection can be found on the conference website.

Furthermore, general meetings and AG meetings of the professional societies can be accessed via Zoom

Topics

- Advanced Regression Modelling (Organizers: Andreas Groll and Andreas Mayr; Invited Speaker: Brian Marx / Paul H.C. Eilers)
- Artificial Intelligence and Machine Learning (Organizers: Sarah Friedrich and Friedhelm Schwenker; Invited Speaker: Frank Köster)
- **Bayesian Statistics** (Organizers: Katja Ickstadt and Thomas Kneib; Invited Speaker: Andrea Riebler)
- **Bioinformatics and Systems Biology** (Organizers: Tim Beißbarth and Anne-Laure Boulesteix; Invited Speaker: Mark Robinson)
- **Causal Inference** (Organizers: Uwe Siebert and Helmut Farbmacher; Invited Speaker: Giovanni Mellace)
- **Clustering and Classification** (Organizers: Christian Henning and Bettina Grün; Invited Speaker: Iven van Mechelen)
- **Computational Statistics and Statistical Software** (Organizers: Gero Szepannek and Roland Fried; Invited Speaker: Julie Josse)
- Data Science (Organizers: Berthold Lausen and Bernd Bischl; Invited Speaker: Rebecca Nugent)
- **Design of Experiments and Clinical Trials** (Organizers: Kirsten Schorning and Geraldine Rauch; Invited Speaker: Cornelia Kunz)
- **Digital and Sensor Data** (Organizers: Holger Leerhoff, Tim Hoppe and Rüdiger Pryss; Invited Speaker: Susan A. Murphey)
- Empirical Economics and Applied Econometrics (Organizers: Robert Jung and Daniel Gutknecht; Invited Speaker: Martin Huber)
- IQWIG/IQTIG (Organizer: Tim Friede)
- Latent Variable Modelling (Organizers: Steffi Pohl and Martin Elff; Invited Speaker: Francis Tuerlinckx)
- Marketing and E-Commerce (Organizers: Friederike Paetz and Daniel Guhl; Invited Speaker: Stephan Seiler)
- Mathematical Statistics (Organizers: Markus Pauly and Hajo Holzmann; Invited Speaker: Ismael Castillo)
- Meta-Analysis (Organizers: Heinz Holling and Annika Hoyer; Invited Speaker: Dan Jackson)
- Network Analysis (Organizers: Göran Kauermann and Steffen Nestler; Invited Speaker: Carter Tribley Butts)
- Official and Survey Statistics (Organizers: Hanna Brenzel and Ralf Münnich; Invited Speaker: Danny Pfeffermann)

Topics

- **Robust and Nonparametric Statistics** (Organizers: Christine Müller and Melanie Birke; Invited Speaker: Catherine Aaron)
- **Spatial and Spatio-temporal Statistics** (Organizers: Carsten Jentsch and Philipp Otto; Invited Speaker: Matthias Katzfuß)
- **Statistical Literacy and Statistical Education** (Organizers: Rolf Biehler and Christine Buchholz; Invited Speaker: Mine Çetinkaya Rundel)
- **Statistical Methods in Epidemiology** (Organizers: Irene Schmidtmann and Ralph Brinks; Invited Speaker: Helene Jacqmin-Gadda)
- Statistics in Agriculture and Ecology, Environmental Statistics (Organizers: Alessandro Fasso and Karin Hartung; Invited Speaker: Kelly McConville)
- Statistics in Behavioral and Educational Sciences (Organizers: Philipp Doebler and Stefan Krauss; Invited Speaker: Sven Hilbert)
- Statistics in Finance (Organizers: Roxanna Halbleib and Lars Winkelmann; Invited Roberto Renò)
- Statistics in Science, Technology and Industry (Organizers: Sonja Kuhnt and Ansgar Steland; Invited Speaker: Daniel Jeske)
- Statistics in the Pharmaceutical and Medical Device Industry (Organizers: Cornelia Kunz and Werner Brannath; Invited Speaker: James Wason)
- Statistics of High Dimensional Data (Organizers: Jörg Rahnenführer and Nestor Parolya; Invited Speaker: Holger Dette)
- STRATOS (Organizers: Heiko Becher and Willi Sauerbrei)
- Survey Methodology (Organizers: Heinz Leitgöb and Carina Cornesse; Invited Speaker: Annette Jäckle)
- **Survival and Event History Analysis** (Organizers: Jan Feifel and Matthias Schmid; Invited Speaker: Maja Pohar Perme)
- Text Mining and Content Analysis (Organizers: Andreas Blätte and Tilman Becker; Invited Speaker: Tomáš Mikolov)
- **Time Series Analysis** (Organizers: Christian Weiß and Dominik Wied; Invited Speaker: Piotr Fryzlewicz)
- Visualisation and Exploratory Data Analysis (Organizers: Adalbert Wilhelm and Helmut Küchenhoff; Invited Speaker: Catherine Hurley)

Scientific Program

We cordially invite you to join the sixth Joint Statistical Meeting DAGStat 2022 at the University Medical Center Hamburg-Eppendorf (UKE). This meeting includes the "Spring Meeting" of the German Statistical Society, the "68th Biometric Colloquium" of the German Region of the International Biometric Society and the "45th annual conference" of the Gesellschaft für Klassifikation.

The conference program includes all fourteen associations of the DAGStat. Matching the motto "Mind the gap - Interplay between theory and practice", the plenary talks address current topics such as statistics in medicine, economics, engineering and social sciences as well as methodological statistics. This broad view of statistics encourages enriching scientific discussions at the conference and social meetings for statisticians of various application areas.

As the DAGStat conferences are international conferences, the conference languages will be English and German. As a general rule, the abstract language is the same as the presentation language.

Conference App

A smartphone app called Conference4me for the conference program can be downloaded from the App or Play Store. After installing the app on your mobile device, you can search for "DAGStat Conference 2022". You can browse through the program in the app, which will be updated regularly throughout the conference.

Plenary Talks

The plenary talks will all be held in HS N55. Due to the limited number of participants allowed, the talks will be streamed live to other lecture halls as needed.

Miguel Hernan (Harvard University, USA)

Opening Session *Title:* Because there is no other way: Estimating vaccine effectiveness using observational data *Time:* Tuesday, March 29, 11:10 am – 12:35 pm *Location:* HS N55, live streaming via Zoom

Tamara Broderick (MIT, USA)

Title: An automatic finite-sample robustness metric: Can dropping a little data change conclusions? *Time:* Wednesday, March 30, 11:10 am – 12:35 pm *Location:* Live streaming in HS N55 and via Zoom

Trevor John Hastie (Stanford University, USA)

Title: Some comments on CV *Time:* Thursday, March 31, 5:00 pm – 6:20 pm *Location:* Live streaming in HS N55 and via Zoom

William H. Woodall (Virginia Tech, USA)

Closing Session *Title:* The evolution of statistical process monitoring *Time:* Friday, April 1, 11:10 am – 12:20 pm *Location:* HS N55, live streaming via Zoom

Invited Talks

According to the latest information, most of the international invited speakers will be able to come to Hamburg and give their talk on-site. Those who cannot come will give their talk online, which will be streamed live in a lecture hall (noted accordingly in the Location field below).

Carter Tribley Butts (University of California, Irvine, USA)

Title: Parametric Network Models for Sets of Relations *Research area:* Network Analysis *Time:* Tuesday, March 29, 9:00 am – 9:40 am *Location:* HS W30

Mine Cetinkaya-Rundel (Duke University, USA)

Title: An educator's perspective of the tidyverse *Research area:* Statistical Literacy and Statistical Education *Time:* Tuesday, March 29, 9:00 am – 9:40 am *Location:* HS N43

Holger Dette (Ruhr-Universität Bochum, Germany)

Title: Testing relevant hypotheses for functional data *Research area:* Statistics of High Dimensional Data *Time:* Tuesday, March 29, 9:00 am – 9:40 am *Location:* HS N61

Annette Jäckle (University of Essex, United Kingdom)

Title: Asking respondents to do more than answer survey questions *Research area:* Survey Methodology *Time:* Tuesday, March 29, 9:00 am – 9:40 am *Location:* HS N55

Cornelia Kunz (Boehringer Ingelheim Pharma GmbH & Co. KG, Germany)

Title: Adaptive phase 2/3 drug development programs – The pros and cons *Research area:* Design of Experiments and Clinical Trials *Time:* Tuesday, March 29, 9:00 am – 9:40 am *Location:* HS N30

Piotr Fryzlewicz (London School of Economics, United Kingdom)

Title: Narrowest significance pursuit: inference for multiple change-points in linear models

Research area: Time Series Analysis Time: Tuesday, March 29, 1:30 pm – 2:10 pm Location: Live streaming in HS N55

Kelly McConville (Harvard University, USA)

Title: Estimating land use and land cover change: An exploration of change measures, estimation tools, and data sources for change detection *Research area:* Statistics in Agriculture and Ecology, Environmental Statistics *Time:* Tuesday, March 29, 3:20 pm – 4:00 pm *Location:* Live streaming in HS W30

Danny Pfeffermann (University of Southhampton, United Kingdom, Hebrew University of Jerusalem, Israel)

Title: Accounting for mode effects and proxy surveys in survey sampling inference with nonignorable nonresponse *Research area:* Official and Survey Statistics *Time:* Tuesday, March 29, 3:20 pm – 4:00 pm *Location:* HS N43

Roberto Renò (University of Verona, Italy)

Title: Zeros *Research area:* Statistics in Finance *Time:* Tuesday, March 29, 3:20 pm – 4:00 pm *Location:* HS N61

Mark Robinson (Universität Zürich, Switzerland)

Title: Adventures in benchmarkizing computational biology *Research area:* Bioinformatics and Systems Biology *Time:* Tuesday, March 29, 3:20 pm – 4:00 pm *Location:* HS N30

Susan A. Murphy (Harvard University)

Title: Assessing Personalization in Digital Health *Research area:* Digital and Sensor Data *Time:* Tuesday, March 29, 5:00 pm – 5:40 pm *Location:* Live streaming in HS W30

Daniel R. Jeske (University of California, Riverside, USA)

Title: Statistical inference for method of moments estimators of a semi-supervised twocomponent mixture model *Research area:* Statistics in Science, Technology and Industry *Time:* Tuesday, March 29, 5:40 pm – 6:20 pm *Location:* Live streaming in HS W30

Sven Hilbert (Universität Regensburg, Germany)

Title: Specifics of analyzing educational data *Research area:* Statistics in Behavioral and Educational Sciences *Time:* Wednesday, March 30, 9:00 am – 9:40 am *Location:* HS W30

Iven van Mechelen (Katholieke Universiteit Leuven and the IFCS Task Force on Benchmarking, Belgium)

Title: Benchmarking in cluster analysis: Preview of a white paper *Research area:* Clustering and Classification *Time:* Wednesday, March 30, 9:00 am – 9:40 am *Location:* HS N30

Andrea Riebler (Norwegian University of Science and Technology, Norway)

Title: Prior elicitation for variance parameters in Bayesian hierarchical models *Research area:* Bayesian Statistics *Time:* Wednesday, March 30, 9:00 am – 9:40 am *Location:* HS N43

Catherine Aaron (Université Clermont Auvergne, France)

Title: Geometric inference and robustness *Research area:* Robust and Nonparametric Statistics *Time:* Wednesday, March 30, 1:30 pm – 2:10 pm *Location:* HS N30

Stephan Seiler (Imperial College London, United Kingdom)

Title: The use of machine learning methods for targeted marketing *Research area:* Marketing and E-Commerce *Time:* Wednesday, March 30, 1:30 pm – 2:10 pm *Location:* HS W30

James Wason (Newcastle University, United Kingdom)

Title: Innovative design and analysis approaches for master protocols *Research area:* Statistics in the Pharmaceutical and Medical Device Industry *Time:* Wednesday, March 30, 1:30 pm – 2:10 pm *Location:* Live streaming in HS N61

Julie Josse (INRIA, France)

Title: Supervised learning with missing values *Research area:* Computational Statistics and Statistical Software *Time:* Wednesday, March 30, 3:20 pm – 4:00 pm *Location:* Live streaming in HS W30

Brian D. Marx (Louisiana State University, USA) / Paul H.C. Eilers (Erasmus University Medical Centre, Dordrecht the Netherlands)

Title: Variations on varying-coefficient signal regression *Research area:* Advanced Regression Modelling *Time:* Wednesday, March 30, 3:20 pm – 4:00 pm *Location:* HS N43

Maja Pohar Perme (IBMI, Medical faculty, University of Ljubliana, Slovenia)

Title: Pseudo-observations in survival analysis *Research area:* Survival and Event History Analysis *Time:* Wednesday, March 30, 3:20 pm – 4:00 pm *Location:* HS N61

Catherine Hurley (Maynooth University, National University of Ireland, Ireland)

Title: Investigating model adequacy, predictor effects and higher-order interactions for machine-learning models *Research area:* Visualization and Exploratory Data Analysis *Time:* Thursday, March 31, 9:00 am – 9:40 am *Location:* HS N43

Dan Jackson (Astra Zeneca, United Kingdom)

Title: Multi-step estimators of between-study variances and covariances and their relationship with the Paule-Mandel estimator *Research area:* Meta-Analysis *Time:* Thursday, March 31, 9:00 am – 9:40 am *Location:* Live streaming in HS W30

Helene Jacqmin-Gadda (Université de Bordeaux, France)

Title: Development of prediction tools for health events from multiple longitudinal predictors *Research area:* Statistical Methods in Epidemiology *Time:* Thursday, March 31, 9:00 am – 9:40 am *Location:* HS N61

Frank Köster (Deutsches Zentrum für Luft- und Raumfahrt, Germany)

Title: AI enables Innovation - Safe and Secure AI is a must for many AI-based Applications *Research area:* Artificial Intelligence and Machine Learning *Time:* Thursday, March 31, 9:00 am – 9:40 am *Location:* HS N30

Martin Huber (University of Fribourg, Switzerland)

Title: Evaluating (weighted) dynamic treatment effects by double machine learning *Research area:* Empirical Economics and Applied Econometrics *Time:* Thursday, March 31, 1:30 pm – 2:10 pm *Location:* HS N30

Giovanni Mellace (University of Southern Denmark, Denmark)

Title: The inclusive Synthetic Control Method *Research area:* Empirical Economics and Applied Econometrics *Time:* Thursday, March 31, 2:10 pm – 2:50 pm *Location:* HS N30

Ismaël Castillo (Sorbonne Université, France)

Title: Some theoretical properties of Bayesian Tree methods *Research area:* Mathematical Statistics *Time:* Thursday, March 31, 3:20 pm – 4:00 pm *Location:* HS W30

Tomáš Mikolov (Charles University Prague, Czech Republic)

Title: Statistical language modeling explained *Research area:* Text Mining and Content Analysis *Time:* Thursday, March 31, 3:20 pm – 4:00 pm *Location:* HS N61

Rebecca Nugent (Carnegie Mellon University, USA)

Title: Demystifying and Optimizing Data Science *Research area:* Data Science *Time:* Thursday, March 31, 3:20 pm – 4:00 pm *Location:* HS N43

Matthias Katzfuß (Texas A&M University, USA)

Title: Scalable Gaussian-Process Inference Using Vecchia Approximations *Research area:* Spatial and Spatio-temporal Statistics *Time:* Friday, April 1, 9:00 pm – 9:40 pm *Location:* HS N30

Martin Spindler (University Hamburg, Germany)

Title: Estimation and Inference of Treatment Effects with L2-Boosting in High-Dimensional Settings *Research area:* Causal Inference *Time:* Friday, April 1, 9:00 am – 9:40 am *Location:* HS N55

Francis Tuerlinckx (Katholieke Universiteit Leuven, Belgium)

Title: Data, parameters and models: Some insights in statistical modeling *Research area:* Latent Variable Modelling *Time:* Friday, April 1, 9:00 am – 9:40 am *Location:* HS W30

Tutorials

The tutorial 'Neural Networks and Deep Learning' takes place online. The other tutorials can only be attended on-site. All tutorials are fee-based and require prior registration.

Neural Networks and Deep Learning

Time: Monday, March 28, 10:00 am – 4:00 pm *Location:* Online via Zoom *Lecturer:* Stefan Simm

RMarkdown for Science

Time: Monday, March 28, 9:00 am – 5:00 pm *Location:* N45 SR 2 *Lecturer:* Linda Krause and Ann-Kathrin Ozga

Bayesian Evidence Synthesis in Practice

Time: Monday, March 28, 9:00 am – 4:00 pm *Location:* N45 SR 3 *Lecturer:* Christian Röver and Sebastian Weber

Introduction to Modern Epidemiology for Non-Epidemiologists

Time: Monday, March 28, 9:00 am – 12:00 am *Location:* N45 SR 4 *Lecturer:* Nicole Rübsamen and André Karch

Introduction to Infectious Disease Epidemiology for Non-Epidemiologists

Time: Monday, March 28, 2:00 pm – 5:00 pm *Location:* N45 SR 4 *Lecturer:* Veronika Jäger and André Karch

Guidelines for Presentation

Talks

Please send your presentation slides in advance by mail to <u>Hamburg2022@dagstat.de</u> or bring them at least half an hour before the start of your session (better already at the registration) on a USB stick to the registration desk in the Erika-Haus. The staff will copy them onto a computer to provide the presentation at the beginning of your talk.

Ensure that your presentation is in PDF format and that all fonts are embedded. Powerpoint format is also possible, but exporting the slides as a PDF is safer. The last name of the presenter should be included in the file name.

DAGStat conferences are international conferences with conference languages English and German. Participants who prefer to speak in German are encouraged to prepare their slides 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.

Please introduce yourself to your session chair 15 minutes before the session starts. The DAGStat assistants (green DAGStat-T-shirts) will be available for technical support.

Talklets

Selected participants can contribute a so-called talklet (pre-recorded presentations). Please prepare an mp4 video of your talk with a maximum length of 10 minutes and upload your video at <u>https://wetransfer.com</u> utilizing the e-mail address <u>knoth@hsu-hh.de</u>. The deadline for the upload is March 14, 2022.

We will upload the video file and make it accessible for the conference participants via the video platform lecture2go of the UHH. Links to the talklets will be made available to all participants via the conference website (password protected).

Three prizes will be awarded for the best talklets. A jury will watch and evaluate the talklets in advance. The winners will be announced during the plenary lecture on Thursday (5:00 pm) and the prizes will be sent to the winners afterwards if they participate online.

Posters

Posters will be displayed on the first floor of the Erika-Haus. Please put up your poster on Tuesday before the lunch break. Your poster ID can be found in the program booklet and on the poster boards. Pins to fix your poster will be provided at the registration desk. Please remove your poster from the poster boards after the Poster and Wine session or on Friday and collect your pins. The conference organizers are not responsible for posters not collected by the end of the conference. During the Poster and Wine session, you are kindly requested to stand next to your poster and be available for questions.

Prizes will be awarded for the three best posters. The posters will be divided into two groups for the jury's walk-through. During the lunch breaks on Tuesday and Wednesday, the jury will visit each half of the posters and ask questions (Tuesday: Poster 1 to 17, Wednesday: Poster 18 to 33, see Section 'Poster and Wine'). The prizes will be awarded during the plenary lecture on Thursday (5:00 pm).

Lehrkräftetag (Teachers' Event)

Please note that this event is an offer for teachers at German schools. Hence, the following information and the program itself are provided in German.

Kompetenter und ethisch verantwortlicher Umgang mit Daten als Unterrichtsthema Fächerverbindende Lehrkräftefortbildung

Zeit: Montag, 28.3., 14.30 – 18.45 Uhr *Ort :* Universitätsklinikum Hamburg-Eppendorf (UKE), Gebäude "Campus Lehre" N55, Ian K. Karan - Hörsaal und Seminarräume, Martinistraße 52, 20251 Hamburg

Zielsetzung: Die Rolle von Daten hat sich in Gesellschaft, Wirtschaft und Alltag in den vergangenen Jahren in Zusammenhang mit der Digitalisierung fundamental geändert. "Daten, das Öl des 21. Jahrhunderts" ist eines der Schlagworte in Zusammenhang mit der Verbreitung automatisierter Datenerhebungssysteme und datengetriebener Entscheidungs- und Empfehlungssysteme. Kompetenzen in Data Literacy sind auf allen Ebenen des Bildungssystems wichtig und betreffen den Mathematik- und Informatikunterricht sowie die Schulfächer Politik, Wirtschaft und Sozialkunde. Technische Kenntnisse müssen mit der Diskussion ethischer Fragen und des sozial verantwortlichen Einsatzes digitaler Technologien verknüpft werden.

Die Fortbildung bringt Fachlehrkräfte aller betroffenen Fächer zusammen, stellt konkrete Unterrichtsmaterialien zur Thematik für die einzelnen Fächer vor und bietet über interdisziplinär ausgerichtete Vorträge Möglichkeiten für fächerübergreifenden Austausch.

Organisation: Deutsche Arbeitsgemeinschaft Statistik (DAGStat) und Landesinstitut für Lehrerbildung und Schulentwicklung Hamburg (LI) – unterstützt durch MNU Hamburg – Verband zur Förderung des MINT Unterrichts

Leitung für die DAGStat: Prof. Dr. Rolf Biehler, biehler@math.upb.de

Programmkomitee: <u>DAGStat</u>: Rolf Biehler, Tim Friede, Sven Knoth, Antonia Zapf; <u>Universität Hamburg</u>: Gabriele Kaiser (Mathematikdidaktik), Sandra Schulz (Informatikdidaktik), Tilman Grammes (Politikdidaktik); <u>Landesinstitut für</u> <u>Lehrerbildung und Schulentwicklung (LI)</u>: Astrid Deseniß (Mathematik/Informatik), Helge Schröder (Sozialwissenschaftliche Fächer).

Statistics for the Public

Statistik für Klimaschutz und Gesundheit – (mehr) Fortschritt wagen!

Public talk (in German) *Time:* Monday, March 28, 7:30 pm – 9:00 pm *Location:* HS N55 and live stream via Zoom *Speaker:* Walter J. Radermacher *Chairs:* Tim Friede, Ralf Münnich

Die Corona Krise hat uns vieles gelehrt, nicht zuletzt die Bedeutung von Daten, Statistiken und Indikatoren für politische Entscheidungen und den öffentlichen Diskurs. Solide Fakten können wesentlich zur Versachlichung und Verbesserung beitragen; unsolide oder schlecht kommunizierte bewirken das Gegenteil, nämlich Fehlentscheidungen, Misstrauen, parallele Wahrnehmungswelten. Man erwartet dementsprechend, im Koalitionsvertrag der Bundesregierung, deren Leitmotiv ist "Deutschland braucht einen umfassenden digitalen Aufbruch", entsprechende Passagen und Aussagen zur Statistik zu finden. Immerhin liefert die Statistik in Deutschland für zahlreiche Politikfelder eine verlässliche Wissensund Entscheidungsbasis und sollte dies auch für die anstehenden Transformationsprozesse hin zur nachhaltigen Entwicklung weiter leisten. Um so irritierender ist der in einem jüngst erschienenen Artikel renommierter deutscher Statistiker getroffene Befund, "dass Deutschland auch nach einem Jahr Pandemie über kein etabliertes statistisches Instrumentarium zur aktuellen Messung der Corona-Infektionen unter Berücksichtigung der Dunkelziffer verfügt." Leider sucht man vergeblich nach auch nur einer einzigen Erwähnung der Statistik im Koalitionsvertrag, obwohl dieser an zahlreichen und prominenten Stellen politische Aussagen hinsichtlich Daten, Digitalisierung, Register, Monitoring, Forschung etc. trifft

"Meinungsfreiheit ist eine Farce, wenn die Information über die Tatsachen nicht garantiert ist." stellte Hannah Arendt bereits Mitte der 1960er Jahre fest.¹ "Die Tatsacheninformation … inspiriert das Denken und hält die Spekulation in Schranken."

¹ Arendt, Hannah. 1964. 'Wahrheit und Politik.' in Johann Schlemmer (ed.), Die politische Verantwortung der Nichtpolitiker (Piper: München).

Dies führt uns erneut vor Augen, dass Statistik eine Wissenschaft und Technologie ist, die darüber hinaus aber die Rolle einer Sprache hat. Gute und gut kommunizierte Statistik kann helfen Entscheidungen zu verbessern und Meinungsbildung zu ermöglichen. Statistiken sind von Natur her auf spezielle Art und Weise politisch; sie sind der Gegenstand von Meinung, ohne jedoch selbst durch Meinungen und Interessen beeinflusst zu werden. Wie kann Statistik dieser schwierigen Aufgabe gerecht werden? Wie können Fakten politisch relevant, nicht aber politisch getrieben sein? Die Antwort auf diese Fragen ist mehrschichtig: Sie umfasst einerseits gute mathematisch-statistische Methodik sowie verlässliche Datenquellen und solide Verarbeitungsprozesse. Auf der anderen Seite muss jedoch auch der Wechselbeziehung zwischen Statistik und Politik Rechnung getragen werden, indem z.B. Rahmenbedingungen geschaffen werden, welche die Unabhängigkeit der Statistik sicherstellen, indem in Statistikbildung investiert wird, usw. Statistik ist eine Infrastruktur, die Geld kostet. Wird an dieser (falschen) Stelle gespart, erzeugt man ein gravierendes Problem, wenn auch vielleicht nicht unmittelbar, dafür aber umso mehr auf längere Sicht.

Speaker:

Walter J. Radermacher is a very well-known representative of official statistics. From 2001 to 2003 he headed and modernized the administration of the Federal Statistical Office, from 2003 to 2006 he was Deputy President and from 2006 to 2008 President of the Federal Statistical Office (Destatis). Subsequently, from 2008 to 2016, Walter J. Radermacher held the position of Director General of the Statistical Office of the European Union (Eurostat) and was Chief Statistician of the European Union. Since 2017 Walter J. Radermacher is President of the Federation of European National Statistical Societies (FENStatS).

Education for Statistics in Practice

Prognosis Research in Healthcare: initiatives to improve methodology standards

Speakers: Richard D Riley and Gary S Collins Time: Wednesday, March 30, 1:30 pm – 4:40 pm Location: HS N55 and live stream via Zoom

In healthcare, prognosis research is the study of future outcomes in individuals with a particular disease or health condition.¹ Statistical methods are fundamental to prognosis research, for example to appropriately summarise, explain and predict outcomes, and to provide reliable results that inform clinical practice and personalized healthcare decisions. However, methodology standards within prognosis research are often sub-standard, with issues including small sample sizes, overfitting, dichotomisation of continuous variables, lack of validation, and selective or incomplete reporting.² These problems have exacerbated with the growth of AI and machine learning methods.

Nevertheless, positive initiatives are being made to help improve prognosis research. In this talk, we will describe a number of these initiatives and encourage participants to adopt and disseminate better practice. Over two 90-minute sessions, we will cover four broad topics and illustrate the issues using real examples.

The series was initiated in 2010 by Willi Sauerbrei (Freiburg). It is currently organized by Willi Sauerbrei, Theresa Keller (Berlin), and Thomas Schmelter (Berlin).

About the presenters:

Richard Riley is a Professor of Biostatistics at Keele University, having previous held posts at the Universities of Birmingham, Liverpool and Leicester. He joined Keele in October 2014 and his role focuses on statistical and methodological research for prognosis and meta-analysis, whilst supporting clinical projects in these areas. He is also a Statistics Editor for the BMJ and a co-convenor of the Cochrane Prognosis Methods Group. Detailed information can be found on the following website https://www.keele.ac.uk/medicine/staff/richardriley/.

Gary's research interests are primarily focused on methodological aspects surrounding the development and validation multivariable prediction (prognostic) models (design and analysis) and he has published extensively in this area. He is particularly interested in the sample size considerations and the role of big data in developing and evaluating prediction models. He is also interested in the systematic review and appraisal of prognostic studies and developed the CHARMS Checklist for conducting systematic reviews of prediction modelling studies. Gary is the principal investigator of a five-year Cancer Research UK Programme grant (2019 to 2024) to improve statistical methodology around studies of prognosis (with a focus on machine learning and artificial intelligence) and initiatives to improve peer review and study reporting. For detailed information, see https://www.ndorms.ox.ac.uk/team/gary-collins.

Abstract:

The PROGRESS Framework

The PROGnosis RESearch Strategy (PROGRESS) provides a framework of four key themes within prognosis research: overall prognosis, prognostic factors, prognostic (prediction) models, and predictors of treatment effect.³⁻⁶ We will describe the rationale for this framework, outline the scope of each theme and why they are important, explain the limitations of current statistical practice in each, and signpost guidance for methodological improvements.

Reporting Guidelines for Prognosis Research

It is crucial for prognosis research studies to be fully and transparently reported (e.g. in terms of their rationale, design, methodology and findings), so that their findings can be critically appraised and utilized as appropriate. We will provide evidence along with examples of poor reporting in current prognosis and prediction studies (including machine learning studies), and showcase new and upcoming reporting guidelines that aim to address current shortcomings.⁷⁸

Sample Size Calculations for Prognostic Model Research

Sample size calculations are rarely undertaken in prognosis model research; if they are, overly-simplistic rules of thumb are often used. In terms of sample size for model development, a well-known rule of thumb is to have at least 10 events per predictor variable, but we will describe a more principled approach based on minimizing expected overfitting and ensuring precise parameter estimation.⁹ In terms of sample size for model validation, a rule of thumb is to ensure at least 100 events and 100 non-events. Again, a more principled approach is possible, and we will describe how it uses

the distribution of the model's linear predictor, and targets precise estimation of key model performance measures (calibration, discrimination and clinical utility).^{10 11}

Individual Participant Data Meta-Analysis for Prognosis Research

One way to increase sample size is to undertake an IPD meta-analysis project, where the participant-level data from multiple existing studies are obtained, checked, harmonized, and synthesized. We will describe what an IPD meta-analysis project entails, and give examples for how it has improved prognosis research. In particular, we demonstrate how it enables non-linear prognostic relationships to be modelled; allows the development and validation of prognostic models across multiple settings and populations; and allow a more powerful and appropriate assessment of predictors of treatment effect.^{12 13}

Reference List

1. Riley RD, van der Windt D, Croft P, et al., editors. Prognosis Research in Healthcare: Concepts, Methods and Impact. Oxford, UK: Oxford University Press, 2019.

2. Hemingway H, Riley RD, Altman DG. Ten steps towards improving prognosis research. BMJ 2009;339:b4184.

3. Hemingway H, Croft P, Perel P, et al. Prognosis research strategy (PROGRESS) 1: a framework for researching clinical outcomes. BMJ 2013;346:e5595.

4. Riley RD, Hayden JA, Steyerberg EW, et al. Prognosis Research Strategy (PROGRESS) 2: prognostic factor research. PLoS Med 2013;10(2):e1001380.

5. Steyerberg EW, Moons KG, van der Windt DA, et al. Prognosis Research Strategy (PROGRESS) 3: prognostic model research. PLoS Med 2013;10(2):e1001381.

6. Hingorani AD, Windt DA, Riley RD, et al. Prognosis research strategy (PROGRESS) 4: stratified medicine research. BMJ 2013;346:e5793.

7. McShane LM, Altman DG, Sauerbrei W, et al. REporting recommendations for tumour MARKer prognostic studies (REMARK). Br J Cancer 2005;93(4):387-91.

8. Collins GS, Reitsma JB, Altman DG, et al. Transparent Reporting of a multivariable prediction model for Individual Prognosis Or Diagnosis (TRIPOD): The TRIPOD Statement. Ann Intern Med 2015;162:55-63.

9. Riley RD, Ensor J, Snell KIE, et al. Calculating the sample size required for developing a clinical prediction model. BMJ 2020;368:m441.

10. Riley RD, Collins GS, Ensor J, et al. Minimum sample size calculations for external validation of a clinical prediction model with a time-to-event outcome. Stat Med 2021

11. Riley RD, Debray TPA, Collins GS, et al. Minimum sample size for external validation of a clinical prediction model with a binary outcome. Stat Med 2021;40(19):4230-51.

12. Riley RD, Debray TPA, Fisher D, et al. Individual participant data meta-analysis to examine interactions between treatment effect and participant-level covariates: Statistical recommendations for conduct and planning. Stat Med 2020;39(15):2115-37.

13. Riley RD, Ensor J, Snell KI, et al. External validation of clinical prediction models using big datasets from e-health records or IPD meta-analysis: opportunities and challenges. BMJ 2016;353:i3140.

Panel Discussion

Statistics in science and society: Mind the gap – from theory to practice

Chairs: Tim Friede, Beate Jahn *Time:* Wednesday, March 30, 9:00 am – 10:30 am *Location:* HS N55

Data and statistics play a vital role in science and society. Relevant data of sufficient quality are the basis for decision analytic modelling and decision making. In this panel we continue the discussion from the session for the public on Monday night (HS N55, 7:30 pm – 9:00 pm). The still ongoing SARS-CoV-2 pandemic highlighted the need for data and statistics and consequences if these are not available. Furthermore, prediction of rare or extreme events and understanding of the underlying mechanisms play an increasingly important role in many fields. Thus, approaches to model and to predict these events became indispensable tools. Examples of situations in which these approaches play a major role include climate change with extreme weather events becoming more frequent.

In this panel discussion, experts from research institutes and government agencies will discuss the role of data and statistics to science and society. The panel will discuss what needs to change to be prepared for future challenges, in particular bridging the gap between theory and practice.

Discussants include:

Jürgen May, Bernhard Nocht Institute for Tropical Medicine, Infectious Disease Epidemiology Department

Kerstin Jochumsen, Bundesamt für Seeschifffahrt und Hydrographie, Meeresphysik und Klima

Walter Radermacher, ehemaliger Präsident des Statistischen Bundesamts und Generaldirektor von Eurostat

Markus Zwick, Institut für Forschung und Entwicklung in der Bundesstatistik, Forschungsdatenzentrum, Statistisches Bundesamt

Note, the discussion will be in German. Die Diskussion wird in deutscher Sprache geführt.

Young Statisticians

Presentations

Time: Wednesday, March 30, 1:20 pm – 3:00 pm *Location:* HS W40 and live stream via Zoom *Chairs:* Hanna Brudermann, Maren Hackenberg

The Young Statisticians Session is organized by the early career working group (AG Nachwuchs) of the IBS-DR and can be seen as a prestigious rehearsal. The chosen Young Statisticians present their research in a friendly atmosphere with the opportunity to get feedback on their presentation. We invite all early career statisticians, but also more experienced statisticians to join the audience. Each talk is followed by a short Q&A, where questions from the audience (in person or online via the chat) are welcome.

This year's winners of the Young Statisticians Session are: Kristin Blesch, Maximilian Kertel, Jana Kleinemeier, Michael Lau, Julian Rodemann, and Sabrina Schmitt.

Panel discussion (in German): Science vs. Industry - Career Options in (Bio-)statistics

Time: Wednesday, March 30, 3:10 pm – 4:50 pm *Location:* HS W40 *Chairs:* Julia, Duda, Stefanie Peschel

Academia, industry, or research institutions? What kind of career options do biostatisticians have and what are the respective advantages and disadvantages? Which steps might be helpful to get there? How to combine job and family and handle dual-career problems? Are there insiders' tips? These are only some of the questions we would like to discuss with five invited speakers who are hand-picked to represent a broad spectrum of career paths in biostatistics. We invite all early-career statisticians (Bachelor/Master/PhD students and Postdocs), but also more experienced statisticians to join the audience. There will be Q&A time, where questions can be asked in person and we also invite the online audience to ask questions at any time in the chat or even before the event via mail to ag-nachwuchs@googlegroups.com. The session is organized by the early career working group (AG Nachwuchs) of the IBS-DR. Panelists: Dr. Kira Alhorn (W. L. Gore & Associates) Verena Endriß (Boehringer Ingelheim) Prof. Dr. Cornelia Frömke (Hochschule Hannover) Jun.-Prof. Dr. Kathrin Möllenhoff (Heinrich-Heine-Universität Düsseldorf) Prof. Dr. Marvin Wright (BIPS Bremen)

Junior meets senior

Time: Tuesday, March 29, 6:30 pm – 8:00 pm *Location:* N55 SR 310/11 *Chair: Linda Krause*

Come together with established colleagues to spend a pleasant evening and have fun. The event "Junior meets Senior" allows doctoral students and young statisticians to meet, chat and interact with the invited speakers and senior colleagues of the conference. In addition, the evening will be rounded off with a quiz in which participants will take part in teams.

Note that for this event prior registration is required.

Date: Mor	ndav. March 28	Location
10:00 am	Tutorial "Neural Networks and Deep Learning"	Online via Zoom
4:00 pm		
9:00 am	Titherial BMackdown for Science"	C BS 2NN
5:00 pm		
9:00 am	Harden and Andrews Constructions	
4:00 pm	i utoriai "payesian Evudence synthesis in Fractice	C NC (C+N
9:00 am		
- 12:00 pm	l utorial "introduction to Modern Epidemiology for Non-Epidemiologists"	N45, 5K 4
12:00 pm		
- 2:00 pm	Lunch	
2:00 pm		
- 5:00 pm	Tutorial "Introduction to Infectious Disease Epidemiology for Non-Epidemiologists"	N45, SR 4
2:30 pm		
- 3:30 pm	IBS-DR Vorstandssitzung	N45, SR 6
2:30 pm		
- 6:45 pm	reachers event (in German Jauguage)	
4:00 pm		NAE CD C
- 6:00 pm		
4:00 pm		
- 6:45 pm	DAGStat Delegiertenversammlung	N55, SR 210/211
7:30 pm		
	Vortrag für die Öffentlichkeit "Statistik für Klimaschutz und Gesundheit – (mehr) Fortschritt wagen!"	HS N55
9:00 pm		

Schedule Т

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Date: Tuesc	ay, March 29					
9:00 am	Survey Methodology I	Statistics of High	Statistical Literacy and	Design of Experiments and	Network Analysis	
- 10.40 am	HS N55	Dimensional Data I HS N61	Statistical Education I HS N43	Clinical Irials I HS N30	HS W30	1
10:40 am						
- 11:10 am			201166	Dreak		
11:10 am			Opening Se	ession and		
- 12:35 pm			Key note Mi HS N55, Live streaming to HS	guel Hernan N30, N43, HS N61, and W30		
12:35 pm -	AG Bayes-Methodik der IBS-DR	AG Non-Clinical <u>Statistics</u> der <u>IBS-</u> DR		Lunch		
1:30 pm	N45, SR 2	N45, SR 3				
1:30 pm	Time Series Analysis I	Statistics of High	Statistical Literacy and	Design of Experiments and	Bioinformatics and	
- 2:50 pm	HS N55		HS N43	HS N30	Systems Biology I HS W30	1
2:50 pm						
- 3:20 pm			COTTEE	Dreak		
3:20 pm	Time Series Analysis II	Statistics in Finance I	Official and Survey	Statistics in Agriculture and Ecology, Environmental	Bioinformatics and	
4:40 pm	HS N55	HS N61	HS N43	Statistics I HS N30	HS W30	I
4:40 pm					-	
- 5:00 pm			Coffee	break		
5:00 pm	Time Series Analysis III	Statistics in Finance II	Official and Survey	Statistics in Agriculture and Ecology, Environmental	Statistics in Science, Technology and Industry +	IBS-DR Mitglieder- versammlung
- 6:20 pm	HS N55	HS N61	HS N43	Statistics II HS N30	Digital and Sensor Data HS W30	HS 045 5:10 pm – 6:30 pm
6:30 pm			Junior me	ets Senior		
- 8:00 pm			N55, SR 3	310/311		

Schedule

Date: Wedn	esday, March 30					
9:00 am	Panel Discussion	Survey Methodology II	Bayesian Statistics I	Clustering and Classification	Statistics in Behavorial and Educational	Young Statisticians
- 10.40 am	HS N55	HS N61	HS N43	HS N30	Sciences HS W30	AG meeting N55 SR310/311
10:40 am						
- 11:10 am			Coff	fee break		
11:10 am			Kev note Tamara Brod	derick and DAGStat medals		
- 12:35 pm			HS N55, live streaming to I	HS N30, N43, HS N61, and W30		
12:35 pm	IBS-DR AG-leaders meeting	GfKI Vorstandssitzung	AG Therapeutische Forschung der GMDS		1 Intervel	
1:30 pm	N45, SR 2	<u>N45,</u> SR 3	N45, SR 4			
1:30 pm	Education – Statistics in	Statistics in the Pharmaceutical and	Bayesian Statistics II	Robust and Nonparametric	Marketing and E-	Young Statistician Presentations
- 2:50 pm	Hractice I HS N55	Medical Device Industry HS N61	HS N43	HS N30	Lommerce HS W30	HS W40 1:20 pm - 3:00 pm
2:50 pm			Caff	iee break		
3:20 pm						
3:20 pm	Education – Statistics in	Survival and Event	Advanced Regression	Robust and Nonparametric	Computational Statistics and Statistical	Young Statistician Panel discussion
4:40 pm	HS N55	HISTORY ANAIYSIS I HS N61	Modelling I HS N43	Statistics II HS N30	Software I HS W30	HS W40 3:10 pm - 4:50 pm
4:40 pm				iae hreak		
5:00 pm						
5:00 pm	IBS-DR Award Session	Survival and Event	Advanced Regression	Robust and Nonparametric	Computational Statistics and Statistical	
6:20 pm	HS N55		HS N43	HS N30	Software II HS W30	ł
7:00 pm			Canfere	ence dinner		
10:00 pm			Rickme	er Rickmers		

Date: Thurse	day, March 31				
9:00 am - 10.40 am	STRATOS Session HS N55	Statistical Methods in Epidemiology I HS N61	Visualisation and Exploratory Data Analysis HS N43	Artificial Intelligence and Machine Learning I HS N30	Meta-Analysis I HS W30
10:40 am - 11:10 am			Coffee break		
11:10 am - 12:20 pm	Advanced Regression Modelling III HS N55	Statistical Methods in Epidemiology II HS N61	Survival and Event History Analysis III HS N43	Artificial Intelligence and Machine Learning II HS N30	Meta-Analysis II HS W30
12:20 pm - 1:30 pm	<u>GfKI</u> Members meeting N45, SR 2	AG Stat. <u>Methoden</u> in der Epidemiologie + AG Stat. <u>Methoden</u> in der <u>Medizin</u> (IBS-DR. <u>DGEpi</u>) N45, SR 3	1	Eunot	
1:30 pm - 2:50 pm	Advanced Regression Modelling IV HS N55	Statistical Methods in Epidemiology III HS N61	Survival and Event History Analysis IV HS N43	Empirical Economics and Applied Econometrics I HS N30	Mathematical Statistics I HS W30
2:50 pm - 3:20 pm			Coffee break		
3:20 pm - 4:40 pm	1	Text Mining and Content Analysis HS N61	Data Science HS N43	Empirical Economics and Applied Econometrics II HS N30	Mathematical Statistics II HS W30
4:40 pm - 5:00 pm			Coffee break		
5:00 pm - 6:20 pm		Ke HS <u>N5</u>	y note Trevor Hastie and poster & <u>t</u> 5, live streaming to HS N30, N43, H	<mark>alklet</mark> prices S N61, and W30	
7:00 pm - 8:30 pm			Poster <mark>and Wine</mark> Erika-Haus		

Date: Friday	4 April 01				
9:00 am -	Causal Inference	Open Topics	IOWIG & IOTIG Session	Spatial and Spatio-temporal Statistics	Latent Variable Modelling
10.40 am	HS N55	HS N61	HS N43	HS <u>N30</u>	HS W30
10:40 am					
			Coffee break		
11:10 am					
11:10 am			Closing Session an	q	
			Key note William H.Wo	llood	
12:30 pm		HS N	55, live streaming to HS N30, N4	3, HS N61, and W30	

Schedule

Session Overview

According to the latest information, all submitted and most international invited talks will be held on-site and all will be streamed live via Zoom.

Tuesday, March 29, 9:00 am - 10:40 am

Survey Methodology I

Time: Tuesday, March 29, 9:00 am – 10:40 am *Location:* HS N55 *Chairs:* Heinz Leitgöb, Carina Cornesse

9:00 am – 9:40 am	Asking respondents to do more than answer survey questions Annette Jäckle
9:40 am – 10:00 am	Influence of the design of open-ended survey questions using conversational agents or voice-based input on the responses <i>Florian Berens</i>
10:00 am – 10:20 am	When and why do respondents consent to passive data collection – Evidence from mouse clicks and GPS data <i>Henning Silber</i>
10:20 am – 10:40 am	Opportunities, challenges, and Limitations of social media recruitment for rare and hard-to-reach populations <i>Zara Zindel</i>

Statistics of High Dimensional Data I

Time: Tuesday, March 29, 9:00 am – 10:40 am *Location:* HS N61 *Chairs:* Jörg Rahnenführer, Nestor Parolya

9:00 am – 9:40 am	Testing relevant hypotheses for functional data
	Holger Dette
9:40 am – 10:00 am	Sequential Gaussian approximation for nonstationary time
	series in high dimensions
	Fabian Mies

10:00 am - 10:20 am Testing many restrictions under heteroskedasticity Stanislav Anatolyey
 10:20 am - 10:40 am Uniform inference in high-dimensional generalized additive models Jannis Kück

Statistical Literacy and Statistical Education I

Time: Tuesday, March 29, 9:00 am – 10:40 am *Location:* HS N43 *Chairs:* Rolf Biehler, Christine Buchholz

9:00 am – 9:40 am	An educator's perspective of the tidyverse Mine Cetinkaya-Rundel
9:40 am – 10:00 am	A didactic experiment on fishing expeditions Maximilian Michael Mandl
10:00 am – 10:20 am	Data Competence Network – Data Literacy Education an der technischen Universität Dortmund Henrike Weinert
10:20 am – 10:40 am	Data Science for informed citizens: On synergies between Digital Literacy and Civic Statistics Joachim Engel

Design of Experiments and Clinical Trials I

Time: Tuesday, March 29, 9:00 am – 10:40 am *Location:* HS N30 *Chairs:* Kirsten Schorning, Geraldine Rauch

- 9:00 am 9:40 am Adaptive phase 2/3 drug development programs The pros and cons *Cornelia Ursula Kunz*
- 9:40 am 10:00 am Blinded sample size recalculation in adaptive enrichment designs Marius Placzek

10:00 am – 10:20 am	Alternative approaches to Delayed Response Group Sequential Design Stephen Schüürhuis
10:20 am – 10:40 am	Optimality of the inverse combination test for two-stage group-sequential designs with early stopping <i>Maximilian Pilz</i>
Network Analysis Time: Tuesday, March 29, Location: HS W30 Chairs: Göran Kauermann	9:00 am – 10:40 am , Steffen Nestler
9:00 am – 9:40 am	Parametric network models for sets of relations Carter Tribley Butts
9:40 am – 10:00 am	All that glitters is not gold: Relational events models with spurious events <i>Cornelius Fritz</i>
10:00 am – 10:20 am	Estimation of ERGMs under missing attribute data Robert Wilhelm Krause
10:20 am – 10:40 am	Modelling of infectious disease spread with spatio-temporal networks Markus Schepers

Tuesday, March 29, 11:10 am – 12:35 pm

Opening Session and plenary talk I *Time:* Tuesday, March 29, 11:10 am – 12:35 pm *Location:* HS N55 *Chairs:* Tim Friede

11:10 am – 11:30 am	Welcoming address Tim Friede (Chair of the DAGStat) Blanche Schwappach-Pianataro (Dean of the University
	Medical Center Hamburg-Eppendorf)
	<i>Klaus Beckmann</i> (President of the Helmut Schmidt University)
	Ralf Münnich (President of the DStatG)
	Annette Kopp-Schneider (President of the IBS-DR)
	Adalbert Wilhelm (Chair of the GfKl Data Science Society)
	Antonia Zapf on behalf of the local organizors
11:30 am – 12:35 pm	Because there is no other way: Estimating vaccine effectiveness using observational data

Miguel Hernan

Tuesday, March 29, 1:30 pm – 2:50 pm

Time Series Analysis I

Time: Tuesday, March 29, 1:30 pm – 2:50 pm *Location:* HS N55 *Chairs:* Christian Weiß, Dominik Wied

- 1:30 pm 2:10 pmNarrowest significance pursuit: inference for multiple change-
points in linear models
*Piotr Fryzlewicz*2:10 pm 2:30 pmConsistent Estimation of multiple breakpoints in dependence
- 2:30 pm 2:50 pm Anomaly detection based on MOSUM statistics in large image data

Philipp Klein

measures

Statistics of High Dimensional Data II

Time: Tuesday, March 29, 1:30 pm – 2:50 pm *Location:* HS N61 *Chairs:* Jörg Rahnenführer, Nestor Parolya

1:30 pm – 1:50 pm	A kernel and distance-covariance perspective on the genomics of quantitative traits <i>Fernando Castro-Prado</i>
1:50 pm- 2:10 pm	Prediction of hepatotoxicity based on gene expression data Franziska Kappenberg
2:10 pm – 2:30 pm	Component-wise L2-boosting for polygenic risk scores based on large cohort data Hannah Klinkhammer

2:30 pm – 2:50 pm Using methods to identify influential points in highdimensional data Shuo Wang

Statistical Literacy and Statistical Education II

Time: Tuesday, March 29, 1:30 pm – 2:50 pm *Location:* HS N43 *Chairs:* Rolf Biehler, Christine Buchholz

1:30 pm – 1:50 pm	Teaching and learning machine learning using educationally designed Jupyter Notebooks Yannik Fleischer
1:50 pm – 2.10 pm	TrainBayes – A training study for medical and law students to improve Bayesian researching <i>Karin Binder</i>
2:10 pm – 2:30 pm	Why are the motivated successful in our classes: A Learning Analytics Study on the effects of attitudes toward statistics on learning behavior <i>Florian Berens</i>
2:30 pm – 2:50 pm	The Covid-19 pandemic as a driver of change in official statistics: New roles of the Federal Statistics Office illustrated by the Covid-19 data hub <i>Markus Zwick</i>

Design of Experiments and Clinical Trials II

Time: Tuesday, March 29, 1:30 pm – 2:50 pm *Location:* HS N30 *Chairs:* Kirsten Schorning, Geraldine Rauch

1:30 pm – 1:50 pm	Optimal does-finding for efficacy-safety-models of Emax-type <i>Frank Miller</i>
1:50 pm – 2:10 pm	On D-Optimal designs for repeated item response testing Fritjof Freise

- 2:10 pm 2:30 pm Comparison of different designs for dose-response gene expression data *Leonie Schürmeyer*
- 2:30 pm 2:50 pm Design and analysis in a non-linear longitudinal Poission regression model Parisa Parsamaram

Bioinformatics and Systems Biology I

Time: Tuesday, March 29, 1:30 pm – 2:50 pm *Location:* HS W30 *Chairs:* Tim Beißbarth, Anne-Laure Boulesteix

1:30 pm – 2:10 pm	Adventures in benchmarking computational biology Mark Robinson
2:10 pm – 2:30 pm	A powerful curve fittingh model for approximation of the transient differential equations dynamics <i>Clemens Kreutz</i>
2:30 pm – 2:50 pm	Better multiple testing: Using multivariate co-data for hypotheses Daniel Fridljand

Tuesday, March 29, 3:20 pm – 4:40 pm

Time Series Analysis II

Time: Tuesday, March 29, 3:20 pm – 4:40 pm *Location:* HS N55 *Chairs:* Christian Weiß, Dominik Wied

- 3:20 pm 3:40 pm A Multivariate Perturbation Robust Test Against Spurious Long Memory Vivien Less
- 3:40 pm 4:00 pm Distinguishing between breaks in the mean and breaks in persistence under long memory *Mwasi Paza Mboya*
- 4:00 pm 4:20 pm Score-based calibriation testing for multivariate forecast distributions Marc-Oliver Pohle
- 4:20 pm 4:40 pm Using tensor product B-splines for nonparametric inference in multivariate hidden markov models *Rouven Michels*

Statistics in Finance I

Time: Tuesday, March 29, 3:20 pm – 4:40 pm *Location:* HS N61 *Chairs:* Roxanna Halbleib, Lars Winkelmann

- 3:20 pm 4:00 pm Zeros Roberto Renò
- 4:00 pm 4:20 pm Roughness in spot variance? A GMM approach for estimation of fractional log-normal stochastic volatility models using realized measures *Bezirgen Veliyev*

4:20 pm – 4:40 pm Inference on jumps in high-frequency order-price models with one-sided noise *Markus Bibinger*

Official and Survey Statistics I

Time: Tuesday, March 29, 3:20 pm – 4:40 pm *Location:* HS N43 *Chairs:* Hanna Brenzel, Ralf Münnich

- 3:20 pm 4:00 pm Accounting for mode effects and proxy surveys in survey sampling inference with nonignorable nonresponse Danny Pfeffermann
- 4:00 pm 4:20 pm Data fusion in the context of microsimulation: Combining semi-parametric methods with statistical learning approaches Jannik Schaller
- 4:20 pm 4:40 pm Estimation of domain specific consumer baskets in Germany Jan Pablo Burgard

Statistics in Agriculture and Ecology, Environmental Statistics I

Time: Tuesday, March 29, 3:20 pm – 4:40 pm *Location:* HS N30 *Chairs:* Alessandro Fasso, Karin Hartung

- 3:20 pm 4:00 pm Estimating land use and land cover change: An exploration of change measures, estimation tools, and data sources for change detection *Kelly Mc Conville*
- 4:00 pm 4:20 pm Truncated generalized extreme value distribution based EMOS model for calibration of wind speed ensemble forecasts Patricia Szokol

4:20 pm – 4:40 pm Restoration of temporal dependence in statistical postprocessing of ensemble weather forecasts *Mária Lakatos*

Bioinformatics and Systems Biology II

Time: Tuesday, March 29, 3:20 pm – 4:40 pm Location: HS W30 Chairs: Tim Beißbarth, Anne-Laure Boulesteix

3:20 pm - 3:40 pm scVIDE: Singlecell variational inference for designing experiments Martin Treppner 3:40 pm - 4:00 pm Bayesian tree-aggregated analysis of compositional amplicon and single-cell data Johannes Ostner Combining deep learning and modeling for time-series single-4:00 pm - 4:20 pm cell RNA-sequencing data Maren Hackenberg A game-theoretic approach for unsupervised ranking and 4:20 pm - 4:40 pm selection of pathways in gene sets Chiara Balestra

Tuesday, March 29, 5:00 pm – 6:20 pm

Time Series Analysis III *Time:* Tuesday, March 29, 5:00 pm – 6:20 pm *Location:* HS N55 *Chairs:* Christian Weiß, Dominik Wied

- 5:00 pm 5:20 pm Dependent wild bootstrap based test for independence under local stationarity *Guy-Niklas Brunotte*
- 5:20 pm 5:40 pm A test of independence for locally stationary processes using a weighted characteristic function-based distance *Carina Beering*
- 5:40 pm 6:00 pm Penalized estimation of INAR models Maxime Faymonville
- 6:00 pm 6:20 pm testing equality of spectral density operators for functional linear processes Anne Leucht

Statistics in Finance II

Time: Tuesday, March 29, 5:00 pm – 6:20 pm *Location:* HS N61 *Chairs:* Roxanna Halbleib, Lars Winkelmann

- 5:00 pm 5:20 pm Generalized correlation measures *Tobias Fissler*
- 5:20 pm 5:40 pm Estimation and inference in factor copula models with exogenous covariates Alexander Mayer
- 5:40 pm 6:00 pm Co-Quantile Regression *Timo Dimitriadis*

6:00 pm – 6:20 pm Bagged value-at-risk forecast combination *Ekaterina Kazak*

Official and Survey Statistics II

Time: Tuesday, March 29, 5:00 pm – 6:20 pm *Location:* HS N43 *Chairs:* Hanna Brenzel, Ralf Münnich

- 5:00 pm 5:20 pm Analysing opportunity cost of care work using mixed effects random forests under aggregated census data *Patrick Krennmair*
- 5:20 pm 5:40 pm Kernel density smoothing of composite spatial data on administrative area level: An application to incidence maps of COVID-19 infections in Germany Ulrich Rendtel
- 5:40 pm 6:00 pm Experimentelle geoereferenzierte Bevölkerungszahl auf Basis der Bevölkerungsfortschreibung und Mobilfunkdaten Sandra Hadam
- 6:00 pm 6:20 pm Trusted Smart Survey: Solutions for the European Statistical System – objectives and main challenges Shari Stehrenberg

Statistics in Agriculture and Ecology, Environmental Statistics II

Time: Tuesday, March 29, 5:00 pm – 6:20 pm *Location:* HS N30 *Chairs:* Alessandro Fassò, Karin Hartung

- 5:00 pm 5:20 pm Calibriation of wind speed ensemble forecasts for power generation Ágnes Baran
- 5:20 pm 5:40 pm Dynamic of the urban acoustic environment during COVID-19 Lockdown in Urban Ruhr Area, Germany Dany Djeudeu

5:40 pm – 6:00 pm	Parametric post-processing of dual-resolution precipitation ensemble forecasts Marianna Szabó
6:00 pm – 6:20 pm	Penalized likelihood adaptive-LASSO algorithm for feature selection in functional HDGM <i>Paolo Maranzano</i>

Statistics in Science, Technology and Industry + Digital and Sensor Data

Time: Tuesday, March 29, 5:00 pm – 6:20 pm *Location:* HS W30 *Chairs:* Sonja Kuhnt, Holger Leerhoff

- 5:00 pm 5:40 pm Assessing personalization in digital health Susan A. Murphy
- 5:40 pm 6:20 pm Statistical inference for method of moments estimators of a semi-supervised two-component mixture model Daniel R. Jeske

Wednesday, March 30, 9:00 am - 10:40 am

Survey Methodology II

Time: Wednesday, March 30, 9:00 am – 10:40 am *Location:* HS N61 *Chairs:* Heinz Leitgöb, Carina Cornesse

- 9:00 am 9:20 am Bias and variance in multiparty election poll *Peter Selb*
- 9:20 am 9:40 am Design weights in panel surveys with multiple refreshment samples. A general discussion with an application to the GESIS panel Matthias Sand
- 9:40 am 10:00 am Using Double Machine Learning to Understand Nonresponse in the Recruitment of a Mixed-mode Online Panel Barbara Felderer
- 10:00 am 10:20 amGeneral-purpose imputation of planned missing data in social
surveys: different strategies and their effect on correlations
Julian B. Axenfeld
- 10:20 am 10:40 am
 Graphical causal models for survey inference

 Peter Selb

Bayesian Statistics I

Time: Wednesday, March 30, 9:00 am – 10:40 am *Location:* HS N43 *Chair:* Thomas Kneib

9:00 am – 9:40 am Prior elicitation for variance parameters in Bayesian hierarchical models Andrea Riebler

9:40 am – 10:00 am	Bayesian boosting for simultaneous estimation and selection of fixed and random effects in high-dimensional mixed models <i>Boyao Zhang</i>
10:00 am – 10:20 am	Bayesian variable and effect selection for quantile regression Anja Rappl
10:20 am – 10:40 am	A Bayesian inference for intensity based load-sharing models with damage accumulation Sophie Tchanyou Ganme

Clustering and Classification

Time: Wednesday, March 30, 9:00 am – 10:40 am *Location:* HS N30 *Chairs:* Christian Hennig, Bettina Grün

9:00 am – 9:40 am	Benchmarking in cluster analysis: Preview of a white paper Iven Van Mechelen
9:40 am – 10:00 am	An empirical comparison and characterization of nine popular clustering methods <i>Christian Henning</i>
10:00 am – 10:20 am	Over-optimistic evaluation and reporting of novel cluster algorithms: An illustrative study Theresa Ullmann
10:20 am – 10:40 am	A new ensemble model for multivariate functional data classification with an application to survey research Amanda Fernández-Frontelo

Statistics in Behavioral and Educational Sciences

Time: Wednesday, March 30, 9:00 am – 10:40 am *Location:* HS W30 *Chairs:* Philipp Doebler, Stefan Krauss

9:00 am – 9:40 am	Specifics of analyzing educational data Sven Hilbert
9:40 am – 10:00 am	Predicting school transition rates in Austria with classification trees Annette Möller
10:00 am – 10:20 am	Simulation-based design optimization for statistical power: Utilizing machine learning Felix Zimmer
10:20 am – 10:40 am	Understanding ability difference measured with count items and their reliability: The distributional regression test model and the count latent regression model <i>Marie Bejsemann</i>

Wednesday, March 30, 11:10 am – 12:35 pm

DAGStat Medals and plenary talk II

Time: Wednesday, March 30, 11:10 am – 12:35 pm *Location:* HS N55 *Chair:* Tim Friede

11:10 am – 11:30 am	Presentation of the DAGStat Medals Christine Müller, Wolfgang Schmid
11:30 am – 12:35 pm	An automatic finite-sample robustness metric: Can dropping a little data change conclusions?

Tamara Broderick

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Wednesday, March 30, 1:30 pm – 2:50 pm

Statistics in the Pharmaceutical and Medical Device Industry

Time: Wednesday, March 30, 1:30 pm – 2:50 pm *Location:* HS N61 *Chairs:* Cornelia Ursula Kunz, Werner Brannath

1:30 pm – 2:10 pm	Innovative design and analysis approaches for master protocols James Wason
2:10 pm – 2:30 pm	Blinded sample size re-estimation in a paired diagnostic study <i>Maria Stark</i>
2:30 pm – 2:50 pm	Power of Logrank and RMST tests for non-constant hazard ratio <i>Reinhard Vonthein</i>

Bayesian Statistics II

Time: Wednesday, March 30, 1:30 pm – 2:50 pm *Location:* HS N43 *Chair:* Katja Ickstadt

- 1:30 pm 1:50 pm The sparse polynomial chaos expansion: A fully Bayesian approach with joint priors on the coefficients and global selection of terms *Paul Bürkner*
- 1:50 pm 2:10 pm Combining point forecasts to calibrated probabilistic forecasts using copulas Jonas Rieger
- 2:10 pm 2:30 pm Supporting COVID-19 quarantine decisions with a statistical risk assessment model *Sonja Jäckle*

2:30 pm – 2:50 pm Bayesian learning in a general class of multivariate nonlinear dynamic panel data models *Ilya Zarubin*

Robust and Nonparametric Statistics I

Time: Wednesday, March 30, 1:30 pm – 2:50 pm *Location:* HS N30 *Chairs:* Christine Müller, Melanie Birke

- 1:30 pm 2:10 pmGeometric inference and robustness
Catherine Aaron
- 2:10 pm 2:30 pm Efficient multivariate inference in general factorial diagnostic studies Maximilian Wechsung
- 2:30 pm 2:50 pm Robust statistical boosting with quantile-based adaptive loss functions Jan Speller

Marketing and E-Commerce

Time: Wednesday, March 30, 1:30 pm – 2:50 pm *Location:* HS W30 *Chairs:* Friederike Paetz, Daniel Guhl

1:30 pm – 2:10 pm	The use of machine learning methods for targeted marketing <i>Stephan Seiler</i>
2:10 pm – 2:30 pm	Good to hear your voice! Interactions of personality traits and smart speaker brand preference voice commerce <i>Carsten Schultz</i>
2:30 pm – 2:50 pm	Mixed-Effects Regression Weights of Advice: Individual Differences in Judgment Formation and Sampling <i>Tobias R. Rebholz</i>

Young Statisticians, Presentations

Time: Wednesday, March 30, 1:20 pm – 3:00 pm *Location:* HS W40 *Chair:* Stefanie Peschel

Introduction and awarding the YSS certificate to

- 1:20 pm 1:30 pm Time-to-event analysis with competing risks considering cluster structures - Comparison of methods based on a simulation study Sabrina Schmitt 1:30 pm - 1:48 pm Prior-mean-RObust Bayesian Optimization (PROBO) Julian Rodemann Evaluation of tree-based statistical learning methods for 1:48 pm - 2:06 pm constructing genetic risk scores Michael Lau Conditional Feature Importance for Mixed Data 2:06 pm - 2:24 pm Kristin Blesch 2:24 pm - 2:42 pm Learning the Joint Distribution with Missing Data under the Gaussian Copula Model Maximilian Kertel
- 2:42 pm 3:00 pm Scalable Estimation for Structured Additive Distributional Regression Through Variational Inference Jana Kleinemeier

Wednesday, March 30, 3:20 am – 4:40 pm

Survival and Event History Analysis ITime: Wednesday, March 30, 3:20 pm – 4:40 pmLocation: HS N61Chairs: Steffen Unkel3:20 pm – 4:00 pmPseudo-observations in survival analysis
Maja Pohar Perme4:00 pm – 4:20 pmA parametric additive hazard model for time-to-event
analysis
Dina Voeltz4:20 pm – 4:40 pmA pseudo-value approach for building regression models with
time-dependent covariate effects
Alina Schenk

Advanced Regression Modelling I

Time: Wednesday, March 30, 3:20 pm – 4:40 pm *Location:* HS N43 *Chairs:* Andreas Groll, Andreas Mayr

3:20 pm – 4:00 pm	Variations on varying-coefficient signal regression <i>Paul H.C. Eilers</i>
4:00 pm – 4:20 pm	Rage against the mean – a review of distributional regression approaches Thomas Kneib
4:20 pm – 4:40 pm	Functional additive models on manifolds of planar shapes and forms Sonja Greven

Robust and Nonparametric Statistics II

Time: Wednesday, March 30, 3:20 pm – 4:40 pm *Location:* HS N30 *Chairs:* Christine Müller, Melanie Birke

3:20 pm – 3:40 pm	Nonparametric regression and classification with functional, categorical, and mixed covariates Leonie Selk
3:40 pm – 4:00 pm	Robust detection for change-points in functional time series based on spatial signs and bootstrap Lea Wegner
4:00 pm – 4:20 pm	Weighted change-point tests based on 2-sample-U-statistics Martin Wendler
4:20 pm – 4:40 pm	High-dimensional nonparametric functional graphical models via the additive partial correlation operator <i>Eftychia Solea</i>

Computational Statistics and Statistical Software I

Time: Wednesday, March 30, 3:20 pm – 4:40 pm *Location:* HS W30 *Chairs:* Gero Szepannek

3:20 pm – 4:00 pm	Supervised learning with missing values <i>Julie Josse</i>
4:00 pm – 4:20 pm	APCtools: An R package for descriptive and model-based age- period-cohort analysis Alexander Bauer
4:20 pm – 4:40 pm	R package 'robcp' for robust detection of change points Sheila Görz

Wednesday, March 30, 5:00 pm – 6:20 pm

IBS-DR Award Session

Time: Wednesday, March 30, 5:00 pm – 6:20 pm *Location:* HS N55 *Chairs:* Annette Kopp-Schneider

- 5:00 pm 5:15 pm Adaptive group sequential designs for single-arm phase II studies with multiple time-to-event outcomes *Moritz Fabian Danzer*
- 5:15 pm 5:30 pm Bayesian variable selection for non-Gaussian responses: a marginally calibrated copula approach Nadja Klein
- 5:30 pm 5:45 pm Evaluation of Misspecified Linear Regression Models for Subgroup Analysis Saide Atmaca
- 5:45 pm 6:00 pm Robust confidence intervals for mixed-effects metaregression with interaction *Eric Samuel Knop*
- 6:00 pm 6:15 pm Time-to-event analysis with competing risks considering cluster structures Comparison of methods based on a simulation study Sabrina Schmitt

Survival and Event History Analysis II

Time: Wednesday, March 30, 5:00 pm – 6:20 pm *Location:* HS N61 *Chairs:* Jan Feifel, Matthias Schmid

5:00 pm – 5:20 pm A stabilised Aalen-Johansen estimator with internal lefttruncation and overly small risks sets Sandra Frank

5:20 pm – 5:40 pm	Addressing hazards in application – a sample size calculation approach for the average hazard ratio Ina Dormuth
5:40 pm – 6:00 pm	Firth correction in Cox proportional hazard analysis in the presence of zero events <i>Lars Beckmann</i>
6:00 pm – 6:20 pm	Flexible tree-structured regression models for discrete event times Nikolai Spuck

Advanced Regression Modelling II

Time: Wednesday, March 30, 5:00 pm – 6:20 pm *Location:* HS N43 *Chairs:* Andreas Mayr

5:00 pm – 5:20 pm	Introducing regularisation to generalised joint regression modelling with an application to football Hendrik van der Wurp
5:20 pm – 5:40 pm	Variable selection and allocation in joint models via gradient boosting techniques Colin Griesbach
5:40 pm – 6:00 pm	Flexible joint models for multivariate longitudinal and time- to-event data using a functional principal components representation of shared random effects <i>Alexander Volkmann</i>
6:00 pm – 6:20 pm	Ridge Model Averaging Alena Skolkova

Robust and Nonparametric Statistics III

Time: Wednesday, March 30, 5:00 pm – 6:20 pm *Location:* HS N30 *Chairs:* Christine Müller, Melanie Birke

5:00 pm – 5:20 pm	Depth-based two-sample testing Felix Gnettner
5:20 pm – 5:40 pm	Statistical models for partial orders based on data depth and formal concept analysis Hannah Blocher
5:40 pm – 6:00 pm	On the uniform control of the Vapnik-Chervonenkis dimension in subgroup discovery using formal concept analysis <i>Georg Schollmeyer</i>
6:00 pm – 6:20 pm	Estimation and testing of Wilcoxon-Mann-Whitney effects in factorial clustered data designs <i>Kerstin Rubarth</i>

Computational Statistics and Statistical Software II

Time: Wednesday, March 30, 5:00 pm – 6:20 pm *Location:* HS W30 *Chairs:* Roland Fried

- 5:00 pm 5:20 pm Interpreting deep Neural Networks with the R package innsight Niklas Koenen
- 5:20 pm 5:40 pm mlr3proba: A unified interface for machine learning with survival tasks *Michel Lang*
- 5:40 pm 6:00 pm mlr3tuning: A general framework for ML hyperparameter tuning Marc Becker

6:00 pm – 6:20 pm DoubleML - An Object-Oriented Implementation of Double Machine Learning in R Philipp Bach

Thursday, March 31, 9:00 am – 10:40 am

STRATOS Session Time: Thursday, March 31, 9:00 am - 10:40 am Location: HS N55 Chairs: Heiko Becher, Willi Sauerbrei 9:00 am - 9:10 am STRATOS – aims, tasks, support of the initiative (10 min) Willi Sauerhrei 9:10 am - 9:35 am Selection of variables and functional forms for multivariable models Geora Heinze 9:35 am - 10:00 am Measurement error and misclassification of covariates: Should we worry? Veronika Deffner 10:00 am - 10:25 am Handling missing data in the analysis: practical guidance for structuring the analysis, choosing the tools, and reporting the results James Carpenter

10:25 am – 10:40 am General discussion

Statistical Methods in Epidemiology I

Time: Thursday, March 31, 9:00 am – 10:40 am *Location:* HS N61 *Chairs:* Irene Schmidtmann, Ralph Brinks

- 9:00 am 9:40 am Development of prediction tools for health events from multiple longitudinal predictors *Helene Jacqmin-Gadda*
- 9:40 am 10:00 am A control selection strategy for differential network testing in intensive care: Revealing diverging dynamics of organ system interactions for survivors and non-survivors *Roman Schefzik*

10:00 am – 10:20 am	Agglomerative Instrumental Va Nicolas Apfel	Hierarchical ariables	Clustering fo	r Sele	cting Valid
10:20 am – 10:40 am	Collaborative hospitalization Johannes Brach	real-time incidence rate <i>er</i>	nowcasting es	of	COVID-19

Visualisation and Exploratory Data Analysis

Time: Time: Thursday, March 31, 9:00 am – 10:40 am *Location:* HS N43 *Chair:* Adalbert F.X. Wilhelm, Helmut Küchenhoff

9:00 am – 9:40 am	Investigating model adequacy, predictor effects and higher- order interactions for machine-learning models <i>Catherine Hurley</i>
9:40 am – 10:00 am	A pattern extraction app for biomedical data Moritz Hess

- 10:00 am 10:20 amWhat implications do analysis choices have on study results?Linda Krause
- 10:20 am 10:40 amVisualizing Goodness of Fit of Probabilistic Regression ModelsMoritz N. Lang

Artificial Intelligence and Machine Learning I

Time: Thursday, March 31, 9:00 am – 10:40 am *Location:* HS N30 *Chairs:* Sarah Friedrich, Friedhelm Schwenker

9:00 am – 9:40 am AI enables Innovation - Safe and Secure AI is a must for many AI-based Applications *Frank Köster*

9:40 am – 10:00 am	Classification of atmospheric circulation patterns using a smoothed deep learning approach Maximilian Weigert
10:00 am – 10:20 am	Statistical monitoring of deep learning models Anna Malinovskaya
10:20 am – 10:40 am	Statistical learning of ECG based on functional Neural Networks

Vi Thanh Pham

Meta-Analysis I

Time: Thursday, March 31, 9:00 am – 10:40 am *Location:* HS W30 *Chairs:* Heinz Holling, Annika Hoyer

- 9:00 am 9:40 am Multi-step estimators of between-study variances and covariances and their relationship with the Paule-Mandel estimator Dan Jackson
- 9:40 am 10:00 am Subgroup identification in individual participant data metaanalysis using model-based recursive partitioning *Cynthia Huber*
- 10:00 am 10:20 am Estimation of effect heterogeneity in rare events metaanalysis Heinz Holling
- 10:20 am 10:40 amMeta-analysis of mean values with unreported variances:
estimation bias due to variance heteroscedasticity when
common joint variance is assumed
Peter Schlattmann

Thursday, March 31, 11:10 am – 12:20 pm

Advanced Regression Modelling III

Time: Thursday, March 31, 11:10 am – 12:20 pm *Location:* HS N55 *Chairs:* Andreas Groll

- 11:10 am 11:30 amBoosting copulas with continuous marginsNicolai Hans
- 11.30 am 11:50 am Boosting bivariate structured additive distributional regression models Annika Strömer
- 11:50 am 12:10 pm Multivariate Distribution Regression Jonas Meier
- 12:10 pm 12:30 pm Modeling trajectories of slowly progressing diseases: A mixed-model-based algorithm for variable transformation, prediction and age-of-onset estimation *Charlotte C. Behning*

Statistical Methods in Epidemiology II

Time: Thursday, March 31, 11:10 am – 12:20 pm *Location:* HS N61 *Chairs:* Irene Schmidtmann, Ralph Brinks

11:10 am – 11:30 am	Data-driven prediction of COVID-19 cases in Germany for decision making <i>Lukas Refisch</i>
11:30 am – 11:50 am	Inference under superspreading: Determinants of SARS-CoV- 2 transmission in Germany Patrick Schmidt
11:50 am – 12:10 pm	Predicting COVID-19 hospitalisation from incidences Thomas Hotz

12:10 pm – 12:30 pm Reevaluating dementia incidence trends: The critical role of adequate design and methodology Anika Schlosser

Survival and Event History Analysis III

Time: Thursday, March 31, 11:10 am – 12:20 pm *Location:* HS N43 *Chairs:* Jan Feifel, Matthias Schmid

- 11:10 am 11:30 am General independent censoring in event-driven trials with staggered entry Jasmin Rühl
- 11:30 am 11:50 am GFDsurv: A flexible toolbox for factorial survival designs as an alternative to Cox models Marc Ditzhaus
- 11:50 am 12:10 pm Implementing disclosure controls in DataSHIELD demonstrated by the dsSurvival package Ghislain Sofack
- 12:10 pm 12:30 pm Random-effects models for quantifying heterogeneity in infectious disease transmission involving two types of contacts Steffen Unkel

Artificial Intelligence and Machine Learning II

Time: Thursday, March 31, 11:10 am – 12:20 pm *Location:* HS N30 *Chairs:* Sarah Friedrich, Friedhelm Schwenker

- 11:10 am 11:30 am Analyzing the Influence of Missing Data Imputation on the Predictive Performance of Classifiers *Philip Buczak*
- 11:30 am 11.50 am Construction of artificial most representative trees by minimizing tree-based distance measures Björn-Hergen Laabs
| 11:50 am – 12:10 pm | Machine learning for multi-output regression: Comparing multivariate approaches with separate univariate ones <i>Lena Schmid</i> |
|---------------------|--|
| 12:10 pm – 12:30 pm | The role of estimands in machine learning algorithm evaluation
Max Westphal |

Meta-Analysis II

Time: Thursday, March 31, 11:10 am – 12:20 pm *Location:* HS W30 *Chairs:* Heinz Holling, Annika Hoyer

11:10 am – 11:30 am	A mechanical analogue of network meta-analysis Theodoros Papakonstantinou
11:30 am – 11:50 am	A stochastic search variable selection approach for identifying inconsistency in network meta-analysis <i>Georgios Seitidis</i>
11:50 am – 12:10 pm	Network meta-analysis of rare events using penalized likelihood regression Theodoros Evrenoglou
12:10 pm – 12:30 pm	Bayesian meta-analysis for exact and interval censored binomial outcomes Manuel Wiesenfarth

Thursday, March 31, 1:30 pm – 2:50 pm

Advanced Regression Modelling IV

Time: Thursday, March 31, 1:30 pm – 2:50 pm *Location:* HS N55 *Chairs:* Andreas Groll, Andreas Mayr

- 1:30 pm 1:50 pm A New Framework for Estimation of Unconditional Quantile Treatment Effects: The Residualized Quantile Regression (RQR) Model Andreas Haupt
- 1:50 pm 2:10 pmFlexible Specification Testing in Quantile Regression ModelsTim Kutzker
- 2:10 pm 2:30 pm Distributional latent class modelling for the indirect estimation of reference distributions using mixture density networks *Tobias Hepp*
- 2:30 pm 2:50 pm Modeling post-lockdown exercise training development during the COVID-19 pandemic in Germany using mixed distributional regression Fabian Otto-Sobotka

Statistical Methods in Epidemiology III

Time: Thursday, March 31, 1:30 pm – 2:50 pm *Location:* HS N61 *Chairs:* Irene Schmidtmann, Ralph Brinks

- 1:30 pm 1:50 pm Regional estimates of reproduction numbers with application to COVID-19 Stefan Heyder
- 1:50 pm 2:10 pm Statistical properties of a prevalence estimator for chronic diseases based on a differential equation: Simulation study in the illness-death-model Sabrina Tulka

2:10 pm – 2:30 pm	Using LASSO regression to estimate the population-level impact of pneumococcal conjugate vaccines Anabelle Wong
2:30 pm – 2:50 pm	Weighted Generalized Estimating Equations for Longitudinal Binary Response: Prevalence Estimation of Health Limitations in the SHARE Study Anastasiia Holovchak, Ruben Wißkott

Survival and Event History Analysis IV

Time: Thursday, March 31, 1:30 pm – 2:50 pm *Location:* HS N43 *Chairs:* Jan Feifel, Matthias Schmid

1:30 pm – 1:50 pm	Similarity of competing risks models with constant intensities in an application to clinical healthcare pathways involving prostate cancer surgery Kathrin Möllenhoff
1:50 pm – 2:10 pm	Smooth hazards with multiple time scales Angela Carollo
2:10 pm – 2:30 pm	The time to progression ratio in molecular tumor trials - a critical examination of current practice and suggestions for alternative methods <i>Dominic Edelmann</i>
2:30 pm – 2:50 pm	Truncating the exponential with a uniform distribution Rafael Weißbach

Empirical Economics and Applied Econometrics I

Time: Thursday, March 31, 1:30 pm – 2:50 pm *Location:* HS N30 *Chairs:* Robert Jung, Daniel Gutknecht

1:30 pm – 2:10 pm Evaluating (weighted) dynamic treatment effects by double machine learning *Martin Huber*

2:10 pm – 2:50 pm	The inclusive Synthetic Control Method
	Giovanni Mellace

Mathematical Statistics I

Time: Thursday, March 31, 1:30 pm – 2:50 pm *Location:* HS W30 *Chairs:* Markus Pauly, Hajo Holzmann

1:30 pm – 1:50 pm	Controlling heterogeneou Sebastian Doe	the is stat <i>hler</i>	False istical te	Discovery sts	Exceedar	ice for
1:50 pm – 2:10 pm	Fast and Fair Parameters Dominik Liebl	Simuli	taneous	Confidence	Bands for F	unctional
2:10 pm – 2:30 pm	Quantile-base multivariate d Marléne Baun	ed M lata in neiste	ANOVA: factoria r	A new I designs	tool for	inferring
2:30 pm – 2:50 pm	Total positivit Frank Röttger	y in m	ultivaria	te extremes		

Thursday, March 31, 3:20 pm – 4:40 pm

Text Mining and Content Analysis Time: Thursday, March 31, 3:20 pm – 4:20 pm Location: HS N61 Chairs: Andreas Blätte, Tilman Becker 3:20 pm – 4:00 pm Statistical language modeling explained Tomáš Mikolov 4:00 pm – 4:20 pm Improving the reliability of LDA results using LDAPrototype as selection criterion Jonas Rieger

Data Science

Time: Thursday, March 31, 3:20 pm – 4:40 pm *Location:* HS N43 *Chairs:* Berthold Lausen, Bernd Bischl

3:20 pm – 4:00 pm	Demystifying and Optimizing Data Science Rebecca Nugent
4:00 pm – 4:20 pm	Marginally calibrated response distributions for end-to-end learning in autonomous driving Nadja Klein
4:20 pm – 4:40 pm	Variational Inference and Sparsity in High-Dimensional Deep Gaussian Mixture Models Lucas Kock

Empirical Economics and Applied Econometrics II

Time: Thursday, March 31, 3:20 pm – 4:40 pm *Location:* HS N30 *Chairs:* Robert Jung, Daniel Gutknecht

3:20 pm – 3:40 pm	Flexible Covariate Adjustments in Regression Discontinuity Designs Claudia Noack
3:40 pm – 4:00 pm	Does Smoking Affect Wages? Mirjam Reutter
4:00 pm – 4:20 pm	A panel SVAR model for European climate policy Simone Maxand
4:20 pm – 4:40 pm	Cross-Sectional Error Dependence in Panel Quantile Regressions Matei Demetrescu

Mathematical Statistics II

Time: Thursday, March 31, 3:20 pm – 4:40 pm Location: HS W30 Chairs: Markus Pauly, Hajo Holzmann

3:20 pm – 4:00 pm	Some theoretical properties of Bayesian Tree methods Ismaël Castillo
4:00 pm – 4:20 pm	Posterior Concentration Rates for Bayesian Penalized Splines <i>Paul Bach</i>
4:20 pm – 4:40 pm	PAC-Bayes training for sparse neural networks Maximilian Steffen

Thursday, March 31, 5:00 pm – 6:20 pm

Poster & talklet prices and plenary talk III

Time: Thursday, March 31, 5:00 pm – 6:20 pm *Location:* HS 55 *Chair:* Hajo Holzmann

5:00 pm – 5:15 pm	Presentation of the poster & talklet prices Heiko Becher, Ann-Kathrin Ozga
5:15 pm – 6:20 pm	Some comments on CV Trevor John Hastie

Friday, April 1, 9:00 am - 10:40 am

Causal Inference <i>Time:</i> Friday, April 1, 9:00 <i>Location:</i> HS N55 <i>Chairs:</i> Uwe Siebert, Heln	am – 10:40 am nut Farbmacher
9:00 am – 9:40 am	Estimation and Inference of Treatment Effects with L2- Boosting in High-Dimensional Settings Martin Spindler
9:40 am – 10:00 am	Retrieving grouped LATEs via Classifier-Lasso Nicolas Apfel
10:00 am – 10:20 am	Survey Scale Forests: Estimating Unconfounded Latent

- 10:00 am 10:20 am
 Survey Scale Forests: Estimating Unconfounded Latent

 Variable Effects
 Franz Leon Classe
- 10:20 am 10:40 amCausal discovery with incomplete cohort data
Ronja Foraita

Open Topics

<i>Time:</i> Friday, April 1, 9:00 am – 10:20 am
Location: HS N61
Chairs: Sven Knoth

- 9:00 am 9:20 am Structured reporting low hanging fruit to improve completeness and transparency of analyses in medical and methodological research *Willi Sauerbrei*
- 9:20 am 9:40 am The role of modern statistical methodology in toxicological research Jörg Rahnenführer
- 9:40 am 10:00 am To adjust or not to adjust: a simple unifying criterion Anne-Laure Boulesteix

10:00 am – 10:20 am An intuitive time-dose-response model for cytotoxicity data with varying exposure times Julia Christin Duda

IQWIG & IQTIG Session

Time: Friday, April 1, 9:00 am – 10:40 am *Location:* HS N43 *Chair:* Tim Friede

- 9:00 am 9:20 am Statistical Challenges in the Quality Assurance of Healthcare Michael Höhle
- 9:20 am 9:40 am Modelling Volume-Outcome Relationships in Health Care Johannes Rauh
- 9:40 am 10:00 am Elicitation of empirical information on between-study heterogeneity in Bayesian meta-analysis Christian Röver
- 10:00 am 10:20 am Application of a hierarchical Bayesian model to determine the empirical distribution of the heterogeneity parameter in IQWiG reports Jong Lilienthal
- 10:20 am 10:40 am Properties of Bayesian meta-analyses in evidence syntheses of very few studies Christoph Schürmann

Spatial and Spatio-temporal Statistics

Time: Friday, April 1, 9.00 am – 10:40 am *Location:* HS N30 *Chairs:* Carsten Jentsch, Philipp Otto

9:00 am – 9:40 am Scalable Gaussian-Process Inference Using Vecchia Approximations *Matthias Katzfuss*

9:40 am – 10:00 am	Approximately Linear INGARCH Models for Spatio-Temporal Counts Christian Weiß
10:00 am – 10:20 am	On the Detection of Changes in Spatio-Temporal GLMs for Count Data Steffen Maletz

 10:20 am - 10:40 am
 Independence test for functional variables based on functional canonical correlation

 Philipp Doebler

Latent Variable Modelling

Time: Friday, April 1, 9:00 am – 10:40 am *Location:* HS W30 *Chairs:* Steffi Pohl, Martin Elff

9:00 am – 9:40 am	Data,	parameters	and	models:	Some	insights	in	statistical
	mode	ling						
	Franci	is Tuerlinckx						

- 9:40 am 10:00 am Continuous-time latent-state modelling of delinquent behaviour in adolescence and young adulthood Sina Mews
- 10:00 am 10:20 amPenalized Non-Linear Principal Components Analysis for
Ordinal Data
Aisouda Hoshiyar
- 10:20 am 10:40 am Optimal Item Calibration in the Context of the Swedish Scholastic Aptitude Test Jonas Bjermo

Friday, April 1, 11:10 am – 12:30 pm

Plenary talk IV and closing session

Time: Friday, April 1, 11:10 am – 12:30 pm *Location:* HS N55 *Chair:* Sven Knoth

11:10 am – 12:15 pm	The evolution of statistical process monitoring
	William H. Woodall

12:15 pm – 12:30 pm Closing the conference *Tim Friede, Katja Ickstadt*

Poster and Wine

Thursday, March 31, 7:00 pm – 8.30 pm

Location: Erika-Haus

Poster 1	Model selection for component network meta-analysis in disconnected networks: a simulation study Maria Petropoulou
Poster 2	Planning and Analysis of Intensified Design of Experiments to Refine Upstream Biopharmaceutical Process Models Verena Nold
Poster 3	Survey Scale Forests: Estimating Unconfounded Latent Variable Effects Franz Leon Classe
Poster 4	Goodness-of-Fit tests for partial linear regression models Cornelia Brämer
Poster 5	Evaluation of competing risks models for application in clinical trials Alexandra Höller
Poster 6	Cox proportional hazards model with heteroscedastic measurement errors Oksana Chernova
Poster 7	Satellite and other remote sensing data to support official statistics <i>Maike Leupold</i>
Poster 8	Prediction-based variable selection for component-wise gradient boosting Sophie Potts
Poster 9	To differ, or not to differ, that is the question - regularized regression modelling for tying cohort-specific effects to global effects in a federated multi-cohort setting <i>Max Behrens</i>

Poster 10	Supervised learning for analyzing movement patterns in a virtual reality experiment Frederike Vogel
Poster 11	Bend your (sp)line: an online learning tool about non-linear modeling for teaching and consulting situations Christine Wallisch
Poster 12	Respiratory Diseases in Pigs – Comparison of Different Hierarchical Modelling Approaches <i>Timur Tug</i>
Poster 13	Anomaly Detection and Timeseries Classification on Sensor Data from Honey Bee Colonies <i>Diren Senger</i>
Poster 14	Recursive partitioning for measuring conditional agreement in method comparison studies Siranush Karapetyan
Poster 15	Sequential permutation testing of Random Forest variable importance measures Alexander Hapfelmeier
Poster 16	Modelling large and dynamically growing bipartite networks - A case study in patent data <i>Giacomo De Nicola</i>
Poster 17	Optimal Experimental Design based in Two-Dimensional Likelihood Profiles <i>Tim Litwin</i>
Poster 18	In-Depth Benchmarking of DIA-type Proteomics Data Analysis Strategies <i>Eva Brombacher</i>
Poster 19	Cheminformatics deciphers stress response and virulence pathways in infection Roberto Olyo Alarcon
Poster 20	Voting advice applications for busy people – fewer questions, similar results with adaptive survey <i>Karl Åke Sigfrid</i>

Poster 21	A longitudinal causal graph analysis investigating modifiable risk factors and obesity in a European cohort of children and adolescents <i>Ronja Foraita</i>
Poster 22	Pilot study of reopening a fitness center with air ventilation during COVID-19 lockdown <i>Eva-Maria Hüßler</i>
Poster 23	Performance of linear discriminant analysis and non-parametric supervised learning algorithms in two-group classification - a method comparison study <i>Ricarda Graf</i>
Poster 24	Fairness audits and and bias mitigation with mlr3fairness Florian Pfisterer
Poster 25	Detecting fatigue and segmentation in sports data through time- uniform martingale bounds Rupsa Basu
Poster 26	Case-only methods to train a predictive classifier in a breast cancer trial Parsa Mohammadian
Poster 27	Analysis of Spatial Clustering at the first German SARS-CoV-2 Super Spreading Event <i>Anika Hüsing</i>
Poster 28	Identifying subgroups of chronically ill patients with negative adherence effects on health care costs using tree-based methods <i>Johannes Wendl</i>
Poster 29	An application of functional additive mixed models on longitudinal monitor data on seasonal allergic rhinitis symptoms <i>Ulrike Grittner</i>
Poster 30	The Addams family of discrete frailty distributions for multivariate survival data <i>Maximilian Bardo</i>
Poster 31	Tempering MCMC for scRNA data: A hot deal or cooling expectations? Jonas Bauer

- Poster 32 Change point analysis of the characteristics of the acoustic environment during the COVID-19 Lockdown in Urban Ruhr Area, Germany *Michael Schweizer*
- Poster 33 Successive Merging of Important Variables from Small Batches for Variable Selection with Cross Leverage Scores in Big Data Problems Sven Teschke

Special Meetings/Committee Meetings

Online participation via Zoom in the general meetings and working group meetings of the professional societies will be made possible. The link to the Zoom conferences will be made available via the website shortly before the conference (password protected).

DAGStat Delegiertenversammlung

Time: Monday, March 28, 4:00 pm – 6:45 pm Location: N55, SR 210/211

IBS-DR Vorstandssitzung

Time: Monday, March 28, 2:30 pm – 3:30 pm Location: N45, SR 6

IBS-DR Beiratssitzung

Time: Monday, March 28, 4:00 pm – 6:00 pm Location: N45, SR 6

AG-Bayes-Methodik der IBS-DR

Time: Tuesday, March 29, 12:35 pm – 1:30 pm Location: N45, SR 2

AG Non-Clinical Statistics der IBS-DR

Time: Tuesday, March 29, 12:35 pm – 1:30 pm Location: N45, SR 3

IBS-DR Mitgliederversammlung

Time: Tuesday, March 29, 5:10 pm – 6:30 pm Location: HS O45

GfKI Vorstandssitzung

Time: Wednesday, March 29, 12:35 pm – 1:30 pm Location: HS N45, SR 3

IBS-DR AG-Leitersitzung

Time: Wednesday, March 30, 12:35 pm – 1:30 pm Location: N45 SR 2

AG Nachwuchs der IBS-DR

Time: Wednesday, March 30, 9:00 am – 10:40 am Location: N55 SR 310/11

GfKI Mitgliederversammlung

Time: Thursday, March 31, 12:20 pm – 1:30 pm Location: N45 SR 2

AG Statistische Methoden in der Epidemiologie und AG Statistische Methoden in der Medizin der IBS-DR und DGEpi Time: Thursday, March 31, 12:30 pm – 1:00 pm Location: N45 SR 3

Awards

DAGStat Medal

In the tradition of previous DAGStat conferences, the DAGStat this year honours two 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 prize winners. Members of DAGStat's executive board present the DAGStat medal on Wednesday morning as part of the plenary session at 11:10 am (HS N55, streamed in HS N43 and HS N61), accompanied by laudatory speeches highlighting the contribution of this year's awardees:

Göran Kauermann Walter Radermacher

Award Session (IBS-DR)

The German Region of the International Biometric Society (IBS-DR) awards the Bernd-Streitberg-Preis and the Gustav-Adolf-Lienert-Preis to promising students and young investigators for outstanding theses and publications in the field of biometry.

The this year's Bernd-Streitberg-Preis go to Eric Samuel Knop, Sabrina Schmitt and Saide Sahin.

The Gustav-Adolf-Lienert-Preis is given to Nadja Klein (1^{st}) and Moritz Fabian Danzer (2^{nd}) .

The awardees will be honored during a special session on Wednesday, March 30, at 5:00 pm (HS N55)

Social Program

Junior meets Senior

Time: Tuesday, March 29, 6:30 pm – 8:00 pm *Location:* N55 SR310/311 **Note that prior registration is required.**

Conference dinner

Time: Wednesday, March 30, 7:00 pm – 10:00 pm Location: *Rickmer Rickmers* (the floating landmark of Hamburg) **Note that prior registration is required.**

Poster & Wine

Time: Thursday, March 31, 7:00 pm – 8:30 pm *Location:* Erika-Haus

Guided Tours

An overview of all guided tours that are offered can be found on the website of the conference:

https://www.dagstat2022.uni-hamburg.de/socialprogram/guidedtours.html Please note that you have to book in advance if you want to join a tour.

Acknowledgements

We gratefully acknowledge financial support from:

- Deutsche Forschungsgemeinschaft (DFG)
- Universität Hamburg and Faculty of Psychology and Human Movement Science, Universität Hamburg

General Information A-Z

Accomodation

For a list of hotels please visit: https://www.dagstat2022.uni-hamburg.de/travelaccomodation/hotels.html

ATMs

Several ATMs are located close to the University Medical Center Hamburg Eppendorf, one of them at the bus station Eppendorfer Park (UKE) and the other inside the main building (O10) (both Sparkasse).

Badge

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

Bicycle Rental

Bicycles can be rented by several operators in Hamburg. Hamburg City Cycles: <u>www.hhcitycycles.de</u> Zweiradperle Hamburg: <u>www.zweiradperle.hamburg</u> Fahrradverleih Altona: <u>www.fahrradverleih-altona.de</u> ERFAHRE Hamburg: <u>www.erfahre.com</u>

Certificate of attendance

A certificate of attendance is part of your conference material.

Coffee breaks

Coffee, tea, and water during the coffee breaks are included in the registration fee and will be served in front of the lecture halls and in the Erika-Haus.

COVID-19 / Hygiene concept

See corresponding section.

Cultural activities

Hamburg bears many cultural highlights and plenty of cafés or bars. You can find an overview of sights here: <u>https://www.hamburg.de/sehenswuerdigkeiten/</u> and here: <u>https://www.hamburg-travel.com/see-</u>

explore/sightseeing/? gl=1*1gyde29* ga*MTkwNDM0NjE0OC4xNjQzMDIxOTMw* ga G0SQ0BF5HQ*MTY0MzAyMTkyOS4xLjAuMTY0MzAyMTkyOS4w& ga=2.215831191.1 238590734.1643021930-1904346148.1643021930

Food and Drinks

Lunch is included in the registration fee. Lunch packages (including vegetarian and vegan option) will be served to the participants during lunch break in front of the lecture halls and in the Erika-Haus. Please remind to keep distance while waiting for the lunch package.

Drinks at the Poster & Wine Session are free of charge. The price for the Conference Dinner includes food (buffet) and drinks.

Language

Conference languages are English and German. As a rule, the language of the abstract should indicate the language in which the presentation will be held.

Office / Conference desk

The registration office is located in the Erika-Haus.

Organizing Institution at the UKE

Institute of Medical Biometry and Epidemiology University Medical Clinic Hamburg-Eppendorf Christoph-Probst-Weg 1, 20251 Hamburg

Parking

There is paid parking available on the UKE Campus.

Public Transport

Hamburg has a well-developed public transport network so that is does not take long to get to most places. You reach the Medical Center Hamburg-Eppendorf by taking

the urban railway lines S1 or S3 to "Altona" station and the bus lines 20 or 25 which will take you directly to the UKE. As an alternative you can take the urban railway lines S21 or S31 to "Holstenstraße" or the subway U1 and U3 to "Kellinghusenstraße" and then change for bus lines 20 or 25. You will find further information on schedules and transfer possibilities on the website of the Hamburger Verkehrsverbund HVV (Hamburg Transport Association).

Тахі

Telephone numbers for a cab in Hamburg: Taxi Hamburg: (040) 66 66 66 Das Taxi: (040) 22 11 22 Taxi Alstertal: (040) 600 30 40

Tourist Information

Central station / Kirchallee 20095 Hamburg or Bei den Landungsbrücken 4 20359 Hamburg

Venue

University Medical Center Hamburg-Eppendorf Campus, Martinistraße 65, 20251 Hamburg.

Wheelchair

All conference locations are wheelchair accessible.

WiFi

The UKE is part of the eduroam network allowing you to use your home institution account. If you do not have an eduroam account you can use the UKE WIFI (@UKE_freeWiFi) that is freely available for everyone.

Map of Conference Venue





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European Network for Buisness and Industrial Statistics – Deutsche Sektion • Statistisches Bundesamt • AG Statistische Methoden in der Epidemiologie der Deutschen Gesellschaft für Epidemiologie e.V. • Deutsche Statistische Gesellschaft • Sektion Methoden der Politikwissenschaft der Deutschen Vereinigung für Politikwissenschaft • DMV-Fachgruppe Stochastik e.V. der Deutschen Mathematiker-Vereinigung • Gesellschaft für Klassifikation e.V. • Deutsche Gesellschaft für Medizinische Informatik, Biometrie und Epidemiologie e.V. • Deutsche Region der Internationalen Biometrischen Gesellschaft • Fachgruppe Methoden und Evaluation der Deutschen Gesellschaft für Psychologie • Sektion Methoden der Empirischen Sozialforschung der Deutschen Gesellschaft für Soziologie • Verband Deutscher Städtestatistiker • Verein zur Förderung des schulischen Stochastikunterrichts e.V. • Ausschuss Ökonometrie im Verein für Sozialpolitik e.V.