

Scientific Program MCP 2022

Day 0 (pre-conference day, Tuesday, August 30, 2022):

Registration & Cloakroom (Seminar Room H1000): 7:30 AM – 5:30 PM

Short Course “*Platform Trials*” (EU-PEARL, Martin Posch and Franz König)

Seminar Room A0010, 9:00 AM – 12:15 PM and 1:30 PM – 5:00 PM

Short Course “*Introduction to Supervised Statistical/Machine Learning Methods with Applications to Biomedical and Public Health Data*” (Adam Ciarleglio)

Seminar Room A0160, 8:00 AM – 12:00 PM and 1:00 PM – 5:00 PM

Social Program: 7:00 PM – 11:00 PM,
"Get together" in the Universum Science Center

Day 1 (Wednesday, August 31, 2022):

Registration & Cloakroom (Seminar Room H1000): 8:00 AM – 5:30 PM

9:00 AM – 11:00 AM (Day 1)

Opening session

Lecture Hall H0070, Session Chairs: Thorsten Dickhaus and Etienne Roquain

- Welcome address by **Prof. Jutta Günther**
(Vice President Research of the University of Bremen)
- Keynote talk by **Ajit Tamhane** (60 minutes):
Testing Primary and Secondary Endpoints in Group Sequential Clinical Trials
- Flash session for the poster presentations (35 minutes)

11:20 AM – 12:50 PM (Day 1)

Session 1-1: Replicability and Reproducibility I

Lecture Hall H0070, Session Chair: Thorsten Dickhaus

11:20 Talk 1 [online]: *Replicability issues in medical research: Science and Politics*,
Yoav Benjamini (30 minutes)

11:50 Talk 2: *Testing partial conjunction hypotheses under dependency*,
Marina Bogomolov (30 minutes)

12:20 Talk 3 [online]: *ETZ: A Clinically Meaningful Model for Assessing Confirmability of Study Results*, **Jason Hsu** (30 minutes)

11:20 AM – 12:50 PM (Day 1, time slot continued)

Session 1-2: Post-hoc FDP control I

Seminar Room H1010, Session Chair: Pierre Neuvial

11:20 Talk 1: *New tools for post-hoc FDP control*, **Vladimir Vovk** (30 minutes)

11: 50 Talk 2: *FDP control in multivariate linear models using the bootstrap*
Samuel Davenport (20 minutes)

12:20 Talk 3: *Notip: Non-parametric True Discovery Proportion estimation for brain imaging*, **Alexandre Blain** (20 minutes)

Session 1-3: Empirical Bayes

Seminar Room A0010, Session Chair: Daniel Yekutieli

11:20 Talk 1: *The edge of discovery: Controlling the local false discovery rate at the margin*, **Jake Soloff** (30 minutes)

11:45 Talk 2 [online]: *Optimality in statistical inference for permutation invariant problems*, **Asaf Weinstein** (30 minutes)

12:10 Talk 3: *Model-free Multiple Testing using Mirror Statistics (MMM)*,
Zhigen Zhao (30 minutes)

Lunch break: 12:35 PM – 1:45 PM

1:45 PM – 3:15 PM (Day 1)

Panel discussion (Session 2-1):

Beyond conventional error rate control: decision-theoretic, conditional, Bayesian approaches

Lecture Hall H0070, Chair: Xinping Cui

Speakers: Werner Brannath, Frank Bretz, Jason Hsu

Panelists: Hsien Ming (James) Hung, Martin Posch, Susanne Urach plus all speakers

Session 2-2: Miscellaneous Topics I

Seminar Room H1010, Session Chair: Anna Vesely

13:45 Talk 1: *Multiple conditional randomization tests*,
Qingyuan Zhao, Yao Zhang (30 minutes)

14:15 Talk 2: *Confident and Logical Selection of the Cut-point of a Biomarker for Patient Targeting*, **Yang Han** (20 minutes)

14:35 Talk 3: *Multiple comparison procedures for discrete uniform and homogeneous tests*, **Marta Cousido-Rocha**, Jacobo de Uña-Álvarez, Sebastian Döhler (20 minutes)

14:55 Talk 4: *Selective inference for false discovery proportion in a Hidden Markov Model*, **Marie Perrot-Dockès**, Gilles Blanchard, Pierre Neuvial, Etienne Roquain (20 minutes)

1:45 PM – 3:15 PM (Day 1, time slot continued)

Session 2-3: Knockoffs and multiple testing - with biomedical applications

Seminar Room A0010, Session Chair: Kostas Sechidis and Aaditya Ramdas

13:45 Talk 1 [online]: *Controlled Discovery and Localization of Signals via Bayesian Linear Programming*, **Lucas Janson**, Spector Asher (30 minutes)

14:15 Talk 2 [online]: *Derandomizing Knockoffs*, **Zhimei Ren** (20 minutes)

14:35 Talk 3: *GGM knockoff filter: False discovery rate control for Gaussian graphical models*, **Jinzhou Li** (20 minutes)

14:55 Talk 4: *Powerful and efficient knockoffs with knockpy*, **Asher Max Spector**, Lucas Janson, Will Fithian (20 minutes)

3:45 PM – 5:15 PM (Day 1)

Panel discussion (Session 3-1): Correct and Logical Causal Inference

Lecture Hall H0070, Moderator: Xinping Cui

Framer of the discussions: Jason Hsu & Frank Bretz

Panelists: Norbert Benda, Yi Liu, Gene Pennello, Sue-Jane Wang, Dong Xi

Session 3-2: Statistical (Machine) Learning

Seminar Room H1010, Session Chair: Adam Ciarleglio

15:45 Talk 1: *False clustering rate control in a mixture mode*, **Ariane Marandon-Carlhian**, Tabea Rebafka, Etienne Roquain, Nataliya Sokolovska (20 minutes)

16:05 Talk 2: *Multiplicity-adjusted confidence intervals for conditional prediction performance measures*, **Pascal Rink**, Werner Brannath (20 minutes)

16:25 Talk 3 [online]: *What can multiple comparisons offer to machine learning?* **Lihua Lei**, Anastasios Angelopoulos, Stephen Bates, Emmanuel Candès, Michael Jordan (20 minutes)

3:45 PM – 5:15 PM (Day 1, time slot continued)

Session 3-3: Multiple testing methodology for group-sequential and platform trials

Seminar Room A0010, Session Chair: Werner Brannath

15:45 Talk 1 [online]: *Evaluating treatment effects in group sequential multivariate longitudinal studies with covariate adjustment*, **Neal Jeffries** (30 minutes)

16:15 Talk 2 : *Adaptive group sequential designs for multiple time-to-event outcomes*, **Moritz Fabian Danzer**, Andreas Faldum, Rene Schmidt (30 minutes)

16:45 Talk 3: *Methods for utilising non-concurrent controls in platform trials*, **Marta Bofill Roig**, Martin Posch (30 minutes)

Social Program: 7:30 PM – 11:00 PM, Town hall reception (open at 7 PM)

Day 2 (Thursday, September 1, 2022):

Registration & Cloakroom (Seminar Room H1000): 8:00 AM – 1:30 PM

8:30 AM – 10:00 AM (Day 2)

Session 4-1: Recent Advances in Generalized Pairwise Comparisons of Multiple Prioritized Endpoints

Lecture Hall H0070, Session Chair: Marc Buyse

8:30 Talk 1: *Generalized Pairwise Comparisons with Prioritized Outcomes*, **Marc Buyse** (30 minutes)

9:00 Talk 2: *Semiparametric Methods for Covariate Adjustment for Net Benefit Effect Sizes for Multiple Outcomes*, **Olivier Thas** (20 minutes)

9:20 Talk 3: *Operational Characteristics of Hierarchical Generalized Pairwise Comparisons Test*, **Vaiva Deltuvaite-Thomas** (20 minutes)

9:40: Talk 4: *Analysis of ordered composite endpoints*, **Michael P Fay**, Dean Follmann, Toshimitsu Hamasaki, Scott Evans (20 minutes)

Session 4-2: Post-hoc FDP control II

Seminar Room H1010, Session Chair: Pierre Neuvial

8:30 Talk 1: *Conditional Versus Unconditional Approaches to Selective Inference*, **Jelle Goeman** (20 minutes)

8:50 Talk 2: *Confidence Intervals for Selected Parameters*, **Tzviel Frostig** (20 minutes)

9:10 Talk 3: *Permutation-based true discovery guarantee by sum tests*, **Anna Vesely** (20 minutes)

9:30 Talk 4: *Flexible control of the median of the false discovery proportion*, **Jesse Hemerik** (20 minutes)

8:30 AM – 10:00 AM (Day 2, time slot continued)

Session 4-3: Replicability and Reproducibility II

Seminar Room A0010, Session Chair: Marina Bogomolov

8:30 Talk 1: *Multiple testing of partial conjunction null hypotheses with application to replicability analysis of high-dimensional studies*, **Thorsten Dickhaus** (30 minutes)

9:00 Talk 2: *Ensemble Inference to Enhance Replicability*, **Livio Finos** (30 minutes)

9:30 Talk 3: *Confidence bounds for the number of positive effects*,
Aldo Solari (30 minutes)

Session 4-4: Multiple testing in the presence of structures

Seminar Room A0160, Session Chair: Sanat K. Sarkar

8:30 Talk 1: *A false discovery rate estimator for model selection*,
Will Fithian (30 minutes)

9:00 Talk 2: *Subgroup selection with a multivariate isotonic regression function*,
Henry William Joseph Reeve, Manuel Muller, Timothy Cannings, Richard Samworth
(20 minutes)

9:20 Talk 3: *Controlling false discoveries under partial, nonparametric knowledge of dependence*, **Drew Nguyen**, William Fithian (20 minutes)

9:40 Talk 4 [online]: *Simultaneous inference across treatment levels, various generalized linear models, time points, primary endpoints, and effect sizes*,
Ludwig A. Hothorn (20 minutes)

10:30 AM – 12:00 PM (Day 2)

Session 5-1: Software developments

Lecture Hall H0070, Session Chair: Frank Bretz

10:30 Talk 1: *rpact: an R Package for Confirmatory Adaptive Group Sequential Designs*
Gernot Wassmer, Friedrich Pahlke (30 minutes)

11:00 Talk 2: *Grammar of Group Sequential Design*
Keaven M Anderson, Yujie Zhao, Nan Xiao, Yilong Zhang (30 minutes)

11:30 Talk 3: *onlineFDR: An R package and Shiny app for online error rate control*
David Robertson (30 minutes)

10:30 AM – 12:00 PM (Day 2, time slot continued)

Session 5-2: Lower bounds for type I / II error tradeoffs

Seminar Room H1010, Session Chair: Jelle Goeman

10:30 Talk 1: *Knowing the signs: a sensible formulation of tests, and multiple tests*,

Kenneth Rice (30 minutes)

11:00 Talk 2 [online]: *Weighted Posterior Odds: A Data Summary for Decision Making*,

Gene Pennello (20 minutes)

11:20 Talk 3 [online]: *Balancing the Trade-Off between type I and II Errors from a Bayesian Perspective*, **Andrew Peter Grieve** (20 minutes, online)

11:40 Talk 4: *Sparse Recovery With Multiple Data Streams: A Sequential Adaptive, Testing Approach*, **Wenguang Sun** (20 minutes)

Session 5-3: On-line multiple testing

Seminar Room A0010, Session Chair: Sebastian Döhler

10:30 Talk 1: *Doubly-sequential experimentation*, **Aaditya Ramdas** (30 minutes)

11:00 Talk 2: *Online multiple testing with super uniformity reward*, **Iqraa Meah**, Sebastian Döhler, Etienne Roquain (20 minutes)

11:20 Talk 3 [online]: *Online False Discovery Rate Control for LORD & SAFFRON Under Positive, Local Dependence*, **Aaron Fisher** (20 minutes)

11:40 Talk 4: *Online multiple testing with FWER control*, **Lasse Fischer** (20 minutes)

Lunch break: 12:00 PM – 1:30 PM

**Social Program: 1:30 PM – 11 PM,
Excursion to Bremerhaven + Conference Dinner**

Day 3 (Friday, September 2, 2022):

Cloakroom & Registration (Seminar Room H1000): 8:30 AM – 1:30 PM

9:00 AM – 10:30 AM (Day 3)

Session 6-1: Selective inference

Lecture Hall H0070, Session Chair: Will Fithian and Ruth Heller

9:00 Talk 1: *Inference on Winners*, **Isaiah Andrews** (30 minutes)

9:30 Talk 2: *Locally Simultaneous Inference*, **Tijana Zrnic**, Will Fithian (20 minutes)

9:50 Talk 3: *Improving knockoffs with conditional calibration*, **Yixiang Luo**, William Fithian, Lihua Lei (20 minutes)

10:10 Talk 4: *Testing at the edge: A frequentist perspective on the local false discovery rate*, **Daniel Xiang**, Jake Soloff, Will Fithian (20 minutes)

9:00 AM – 10:30 AM (Day 3, time slot continued)

Session 6-2: Miscellaneous Topics II

Seminar Room H1010, Session Chair: Aldo Solari

9:00 Talk 1: *Nonparametric methods for clustered data in the several sample case*, **Erin Sprünken** (20 minutes)

9:30 Talk 2: *On positive association of absolute-valued and squared multivariate Gaussians beyond MTP₂*, **Helmut Finner**, Markus Roters (20 minutes)

9:50 Talk 3: *Inference in generalized linear models with robustness to misspecified variances*, **Riccardo De Santis**, Jelle J. Goeman, Jesse Hemerik, Livio Finos (20 minutes)

10:10 Talk 4: *Application of multiple hypotheses testing procedures to market network analysis*, **Petr Koldanov** (20 minutes)

Session 6-3: Adaptive inference

Seminar Room A0010, Session Chair: Livio Finos

9:00 Talk 1: *Score Attack: A Lower Bound Technique for Differentially Private Estimation*, **Yichen Wang** (30 minutes)

9:30 Talk 2: *Optimal allocation of Monte Carlo simulations to multiple hypothesis tests*, **Georg Hahn**, Christoph Lange (20 minutes)

9:50 Talk 3: *Machine learning meets false discovery rate*, **Etienne Roquain**, Lihua Lei, Ariane Marandon, David Mary (20 minutes)

10:10 Talk 4: *Sequential algorithmic modification with test data reuse*, **Alexej Gossmann**, Jean Feng, Gene Pennello, Nicholas Petrick, Berkman Sahiner, Romain Pirracchio, (20 minutes, online)

11:00 AM – 1:00 PM (Day 3)

Closing session

Lecture Hall H0070, Session Chair: Werner Brannath

- Keynote Talk by **Ruth Heller** (60 Minutes):
Designing Optimal Multiple Testing Procedures
- Award ceremony for poster prizes
- Farewell Address

Posters (will hang during the whole conference time):

- *Post-selection inference for e-value based confidence intervals*
Ziyu Xu, Ruodu Wang, Aaditya Ramdas
- *Machine Learning Techniques for Breast Cancer Risk Prediction: Comparison with the BCRAT*, Berfu Parcali, Fezan Mutlu
- *Hommel BH: an adaptive Benjamini-Hochberg procedure using Hommel's estimator for the number of true hypotheses*
Chiara Gaia Magnani, Jelle J. Goeman, Aldo Solari
- *Controlling the false discovery rate under dependency with the adaptively weighted bh procedure*
Mengqi Lin, William Fithian
- *IIDEA: Interactive Inference for Differential Expression Analyses*
Nicolas Enjalbert Courrech, Pierre Neuvial
- *Randomized p-values in Binomial Models and in Group-Testing*
Daniel Ochieng Odipo, Anh-Tuan Hoang, Thorsten Dickhaus
- *Haplotype based testing for a better understanding of the selective architecture*
Haoyu Chen, Marta Pelizzola, Andreas Futschik
- *What implications do analysis choices have on study results?*
Linda Krause, Antonia Zapf
- *Multiple multi-sample testing under arbitrary covariance dependency*
Vladimir Krasimirov Vutov, Thorsten Dickhaus
- *Combining Multiple Testing with Multivariate Singular Spectrum Analysis*
Maryam Movahedifar, Thorsten Dickhaus
- *Time-course analysis of multiple endpoints in real-world medical data, with an example on hospitalized COVID-19 patients*
Anat Reiner-Benaim
- *Data fission: splitting a single data point*
James Leiner, Boyan Duan, Larry Wasserman, Aaditya Ramdas
- *Multiple testing procedure for crack detection in concrete data*
Duc Nguyen

Acknowledgments

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MCP Conference 2022 | Location Map



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|--------------------------|----------------|
| HS - Lecture Hall | A - GW1 |
| Rooms: | Rooms: |
| H 0070 | A 0010 |
| H 1000 | A 0150 |
| H 1010 | A 0160 |

All rooms accessible for wheelchair users.

