Institut für Statistik und Operations Research
Department of Statistics and Operations Research

universität wien

ANNUAL REPORT

2013

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Contents

1 Foreword

I am pleased to present the Annual Report of the Department of Statistics and Operations Research, which documents some of the many achievements in 2013. The Department of Statistics and Operations Research is part of the Faculty of Business, Economics and Statistics of the University of Vienna. Faculty members are active in research in various fields of Statistics, Econometrics, Operations Research, Applied Mathematics, and Computer Science. The department offers degree programs in Statistics at the bachelor, master, and PhD-level. During the academic year 2012/13 the department taught also many undergraduate and graduate courses for programs run by other departments, including the Department of Business Administration and the Department of Economics.

In 2013, our department has been strengthened by the arrival of François Bachoc, Peter Dickinson, Markus Leitner and Reinhard Ullrich as assistants, Nikolaus Hautsch and Ivana Ljubic as Professors and Madlen Stottmeyer as administrative assistant.

Regrettably, there were also several departures. Stefan Gollowitzer, Simone Hackl, and Anna Timonina left the department to pursue new professional opportunities. We wish them well in their new position.

I would like to express special thanks to Vera Lehmwald for editing the Annual Report 2013.

Hannes Leeb (HoD)

Vienna, January 2015

2 Faculty and Staff

2.1 Regular Faculty

François Bachoc (PhD)	Gaussian Process Modeling, Covariance Function Estimation, Metamodeling and Validation of Computer Models, Small-Probability Estimation, Model Selection
Immanuel Bomze (Prof.)	Operations Research and Quantitative Decision Support, Game Theory and Modelling of Behaviour, Optimization Theory and Application, Asymptotic Statistics, Stochastic Modelling, Dynamical Systems
Peter Dickinson (Dr.)	Copositive Optimisation, Conic Optimisation, Polynomial Optimisation
Andreas Futschik (Assoc. Prof.)	Asymptotic Statistics, Applied Statistics, Bioinformatics
Stefan Gollowitzer (Dr.)	Combinatorial Optimization, (Mixed) Integer Programming, Network Design
Walter Gutjahr (Prof.)	Optimization Theory, Discrete Optimization, Stochastic Modeling, Multicriteria Decision Analysis
Nikolaus Hautsch (Prof.)	Financial Econometrics, Econometric Modelling of Financial High-Frequency Data, Time Series Econometrics, Time-Varying Volatility and Correlation, Market Liquidity, Market Microstructure Analysis, Systemic Risk, Information Processing on Financial Markets, Risk Management
Irene Klein (Assoc. Prof.)	Stochastic Finance
Raimund Kovacevic (Dr.)	Stochastic Optimization, Quantitative Risk Management, Stochastic Processes in Finance and Insurance
Hannes Leeb (Prof.)	Model Selection, Regularization, and Shrinkage, Statistical Analysis of High-Dimensional Data, Spectral Analysis of Large Random Matrices
Ivana Ljubic (Ass. Prof.)	Algorithmic Operations Research, Algorithm Engineering
Ivana Milovic (MSc)	Model Selection in High-Dimensional Linear Models
Georg Pflug (Prof.)	Mathematical Statistics, Stochastic Optimization, Risk Management
Benedikt Pötscher (Prof.)	Econometrics, Statistics, Time Series Analysis
David Preinerstorfer (MMag.)	Mathematical Statistics, Econometrics, Time Series Analysis, Psychometrics
Erhard Reschenhofer (Assoc. Prof.)	Time Series Analysis, Financial Econometrics, Automatic Model Selection, Chronobiology
Werner Schachinger (Assoc. Prof.)	Optimization, Probabilistic Analysis of Algorithms

Nina Senitschnig (Dr.)	Mathematical Statistics, Predictive Inference, Shrinkage Estimation in High Dimensions, Nonparametric Regression
Lukas Steinberger (Mag.)	Mathematical Statistics, Statistical Analysis of High-Dimensional Data
Reinhard Ullrich (MMag.)	Evolutionary Game Theory and Dynamical Systems

2.2 Externally Funded Faculty

Johanna Bertl (Mag.)	Biostatistics, Approximate Inference
Markus Leitner (Dr.)	Operations Research, Combinatorial Optimization, (Mixed) Integer Linear Programming, Multi-objective Optimization
Anna Timonina (MSc)	Stochastic Optimization, Robust Optimization, System Analysis, Information Control and Processing, Data Mining

2.3 External Lecturers (Academic Year 2012/13)

Andreas Baierl (Dr.), Johann Brandstetter (Dr.), Andreas Chwatal (Dr.), Marek Chudy (MSc), Manfred Deistler (Prof., University of Technology Vienna), Marlies Dolezal (Dr.), Evelina Erlacher (Dr.), Florian Frommlet (Privatdoz.), Alexandra Graf (Ass.-Prof.), Wilfried Grossmann (Prof., Educational Technologies, Faculty of Computer Science), Clemens Hanel (Dr.), Georg Heinze (Assoc. Prof., Medical University of Vienna), Marcus Hudec (Assoc. Prof., Data Analytics and Computing, Faculty of Computer Science), Johannes Klotz (Mag.), Simon Konzett (Mag.), Carolin Kosiol (Dr.), Raimund Kovacevic (Dr.), Christoph Krall (Dr.), Markus Leitner (Dr.), Ivana Ljubic (Ass. Prof.), Nysret Musliu (Privatdoz.), Herbert Nagel (Dr.), Andreas Novak (Assoc. Prof., Dept. of Business Administration), Stefan Rath (Dr.), Peter Reiter (Dr.), Robin Ristl (Dr.), Ulrike Schneider (PhD), Rüdiger Schultz (Guest Prof.), Harald Schwab (Dr.), Christian Spreitzer (Mag.), Gabriel Strasser (Mag.), Alexander Tichy (Dr.), Gabriele Uchida (Assoc. Prof., Data Analytics and Computing, Faculty of Computer Science), Reinhard Ullrich (MMag.), Claus Vogl (Dr., University of Veterinary Medicine Vienna), Martin Wagner (Dr.), Bertram Wassermann (Dr.), Johannes Wessely (Mag.), Martin Wolfsegger (Dr.), David Wozabal (Dr., Dept. of Business Administration), Marcus Wurzer (Dr.)

2.4 Teaching Assistants (Academic Year 2012/13)

Bernhard Kober, Christine Wallisch

2.5 Tutors (Academic Year 2012/13)

Engin Aysegül, Stefan Bock, Tinatini Buturishvili, Sarah Dippenaar, Markus Gabl, Julia Gruber, Bernhard Hrobath, Florentin Kerschbaumer, Yoanna Manolcheva, Daniel Obszelka, Alexander Ruth, Carina Steindl, Dominik Stelzeneder, Michael Themessl-Huber, Carolina Torossian, Klaus Winhofer, Michaela Zehetner

2.6 Administrative Assistants

Birgit Ewald, Gerald Kamhuber, Vera Lehmwald, Manuela Nicham-Zorn, Madlen Stottmeyer

2.7 Systems Administrators

Jürgen Berlakovich, Georg Fochler, Stefan Geißler, Rolf Karner, Svetlana Mihajlovic

3 Visitors

Eduardo Àlvarez-Miranda (University of Bologna, Italy), Fernando Cordero (University of Bielefeld, Germany), Lavinia Perez-Ostafe (ETH Zurich, Switzerland), William E. Strawderman (Rutgers University, USA)

4 Teaching

4.1 Courses Taught (Academic Year 2012/13)

Winter Term 2012/13

Lecturer	**Course Title**
Andreas Baierl/Marcus Hudec	UK Programming in Statistics
Andreas Baierl/Alexandra Graf	UK Biostatistics
Johann Brandstetter	VK STEOP: Introduction to Business Mathematics (VK) FK WMS: Business Mathematics 2 (2 sections)
Andreas Chwatal	VK STEOP: Introduction to Business Mathematics (VK) (2 sections)
Manfred Deistler/Hannes Leeb	SE PhD-AW: Research Privatissimum in Econometrics/Statistics
Evelina Erlacher	UE STEOP: Linear Algebra (UE)
Andreas Futschik	SE Statistical Inference in Biostatistics and Genetics UK Case Studies in Statistics
Andreas Futschik/Erhard Reschenhofer	PR Practical Course
Andreas Futschik/Alexander Tichy/Martin Wolfsegger	UK Selected Topics in Statistics
Stefan Gollowitzer	UE STEOP: Linear Algebra (UE) (2 sections)
Peter Gross/Raimund Kovacevic	UK Mathematical Statistics
Wilfried Grossmann	UK Applied Statistics
Walter Gutjahr	UK Decision Support VO STEOP: Exercises in Probability (VO)
Walter Gutjahr/Peter Reiter	EK KFK OR: Operations Research I
Walter Gutjahr/Stefan Rath	EK KFK CTR/OR/ORGA/PÖ: Game Theory VU Computational Techniques
Walter Gutjahr/Gabriele Uchida	UK PhD-AW: Advanced Optimization
Clemens Hanel	VK STEOP: Introduction to Business Mathematics (VK) FK WMS: Business Statistics 1 UE STEOP: Exercises in Probability (UE)
Marcus Hudec	UK Complex Statistical Methods
Irene Klein	VO Markov Processes UE Exercises in Markov Processes UK Financial and Insurance Mathematics
Simon Konzett	UE STEOP: Exercises in Probability (UE)

Lecturer	Course Title
Carolin Kosiol/Marlies Dolezal	UK Statistical Genetics and Bioinformatics
Christoph Krall	FK WMS: Business Statistics 1 (3 sections)
Hannes Leeb	SE PhD-AW: ISOR-Colloquium
Hannes Leeb/Ivana Milovic	UK Probability Theory 1
Hannes Leeb/Lukas Steinberger	UK Asymptotic Statistics
Markus Leitner	VK STEOP: Introduction to Business Mathematics (VK) (2 sections)
Nysret Musliu/Johannes Klotz	UK Machine Learning
Herbert Nagel	FK WMS: Business Statistics 2 (2 sections)
Georg Pflug	UK Introduction to Financial Mathematics VO PhD-AW: Stochastic Optimization
Georg Pflug/Raimund Kovacevic	VO STEOP: Basic Principles of Statistics
Georg Pflug/Harald Schwab	UK StEOP: Introduction to Business Mathematics
Alois Pichler	UE STEOP: Exercises in Probability (UE)
Benedikt Pötscher/Hannes Leeb/Martin Wagner	SE PhD-VGSE: Research seminar in Econometrics
David Preinerstorfer	UE STEOP: Exercises in Probability (UE)
Erhard Reschenhofer	UK Time Series Analysis
Robin Ristl	FK WMS: Business Statistics 2
Werner Schachinger	VO Advanced Analysis UE Advanced Analysis
Werner Schachinger/Andreas Novak	VO STEOP: Linear Algebra (VO)
Ulrike Schneider	VO Linear Models
Harald Schwab	FK WMS: Business Mathematics 1 (3 sections)
Nina Senitschnig	UE Linear Models (3 sections)
Christian Spreitzer	VK STEOP: Introduction to Business Mathematics (VK) FK WMS: Business Mathematics 2
Lukas Steinberger	UE STEOP: Exercises in Probability (UE)
Gabriel Strasser	VK STEOP: Introduction to Business Mathematics (VK) FK WMS: Business Mathematics 2 (2 sections)
Reinhard Ullrich	VK STEOP: Introduction to Business Mathematics (VK) UE STEOP: Exercises in Probability (UE) (2 sections)
Claus Vogl	UK Biometrics 2
Bertram Wassermann	FK WMS: Business Statistics 2

Lecturer	Course Title
Johannes Wessely	VK STEOP: Introduction to Business Mathematics (VK) (2 sections) FK WMS: Business Mathematics 1
Marcus Wurzer	FK WMS: Business Statistics 2

Summer Term 2013

Immanuel Bomze	UK Applied Optimization SE Seminar in Statistics
Immanuel Bomze/Werner Schachinger	UK PhD-AW: Advanced Optimization
Immanuel Bomze/Werner Schachinger/Reinhard Ullrich	UK Dynamical Economic Modelling - Mathematical Methods B for Economists
Immanuel Bomze/Harald Schwab	UK STEOP: Introduction to Business Mathematics (UK)
Johann Brandstetter	VK Introduction to Business Mathematics FK WMS: Business Mathematics 2 (2 sections)
Andreas Chwatal	FK WMS: Business Mathematics 1
Sarah Dippenaar	VK Introduction to Business Mathematics FK WMS: Business Statistics 1
Evelina Erlacher	UE STEOP: Exercises in Probability (UE)
Florian Frommlet	UK Linear Multivariate Statistics UK Biometrics 1
Andreas Futschik	PR Statistical Genetics and Bioinformatics
Andreas Futschik/Marcus Hudec	VO Introduction to Statistical Inference
Andreas Futschik/Andreas Baierl	VO Introduction to Biostatistics
Andreas Futschik/Carolin Kosiol	UK PhD-AW: Applied Statistics
Andreas Futschik/Reinhard Bürger/Joachim Hermisson/Christian Schlötterer	SE Seminar (Mathematical population genetics)
Andreas Futschik/Georg Heinze/Robin Ristl/Alexander Tichy	PR Statistical Consulting
Stefan Gollowitzer	VK Introduction to Business Mathematics
Wilfried Grossmann/Marcus Hudec	UK Generalized Linear Model
Walter Gutjahr	UK Methods of Decision Support SE KFK OR: Computational Operations Research UK Classification, Clustering and Discrimination DK PhD-L: Advanced Stochastic Models VO+UE Network Analysis
Clemens Hanel	FK WMS: Business Statistics 1 (2 sections)

Lecturer	Course Title
Marcus Hudec/Andreas Baierl	UK Computational Statistics
Irene Klein	UK Stochastic Processes
Irene Klein/Ivana Milovic	UK Probabiltiy Theory 2
Raimund Kovacevic	UE Exercises in Analysis
Raimund Kovacevic/Ivana Ljubic	UK KFK OR: Operations Research II
Christoph Krall	FK WMS: Business Statistics 1 (2 sections) FK WMS: Business Statistics 2
Hannes Leeb/Benedikt Pötscher	SE PhD-AW: ISOR-Colloquium
Markus Leitner	VK Introduction to Business Mathematics FK WMS: Business Mathematics 1
Ivana Milovic	FK WMS: Business Statistics 1
Herbert Nagel	FK WMS: Business Statistics 2 (3 sections)
Georg Pflug	UK Introduction to Insurance Mathematics SE Seminar in Statistics for Master Studies VO PhD-AW: Advanced Stochastic Processes
Georg Pflug/David Wozabal	UK Nonparametric Inference and Resampling
Benedikt Pötscher	UK Introduction to Econometrics UK Econometrics
Benedikt Pötscher/Hannes Leeb	SE PhD-VGSE: Research seminar in Econometrics
Benedikt Pötscher/Manfred Deistler	SE PhD-AW: Research Privatissimum in Econometrics/Statistics
David Preinerstorfer	UE Exercises in Statistical Inference (2 sections)
Erhard Reschenhofer	UK Multivariate Time Series Analysis FK nBWM: Financial Econometrics (2 sections)
Werner Schachinger	UK Stochastic Models VO Analysis
Harald Schwab	FK WMS: Business Mathematics 1 (3 sections)
Nina Senitschnig	UE Exercises in Statistical Inference (2 sections)
Christian Spreitzer	VK Introduction to Business Mathematics FK WMS: Business Mathematics 2 (2 sections)
Lukas Steinberger	UE STEOP: Exercises in Probability (UE) UE Exercises in Analysis
Gabriel Strasser	UE STEOP: Exercises in Probability (UE) UE STEOP: Linear Algebra (UE) VK Introduction to Business Mathematics
Anna Timonina	FK WMS: Business Mathematics 1

Lecturer	Course Title
Gabriele Uchida	PR KFK OR: Software Applications in Operations Research
Reinhard Ullrich	UE Exercises in Analysis (2 sections)
Bertram Wassermann	FK WMS: Business Statistics 2
Johannes Wessely	VK Introduction to Business Mathematics FK WMS: Business Mathematics 1 FK WMS: Business Mathematics 2

4.2 Theses Supervised

4.2.1 PhD Theses in Progress

Supervisor	Author	Title
Immanuel Bomze, Werner Schachinger	Reinhard Ullrich	Selecting equilibria from an ample choice
Immanuel Bomze, Ivana Ljubic	Markus Sinnl	Bi-objective optimization for telecommunication networks
Andreas Futschik	Johanna Bertl	Approximate inference in population genetics
Hannes Leeb	Ivana Milovic	Model selection in high-dimensional linear models in situations where the number of explanatory variables is substantially larger than the sample size
Hannes Leeb	Lukas Steinberger	Statistical inference when fitting linear models to high dimensional data
Ivana Ljubic*	Eduardo Àlvarez-Miranda (University of Bologna)	Networks, uncertainty, applications and a crusade for optimality
Ivana Ljubic	Markus Sinnl	Multi-objective network optimization (working title)
Georg Pflug	Anna Timonina	Approximation of probability distributions in multi-stage stochastic optimization
Georg Pflug	Bita Analui	Multistage stochastic optimization of energy portfolios under model ambiguity
Georg Pflug	Peter Gross	Risk averse bilevel programs with applications in energy markets
Georg Pflug	Eric-John Laas-Nesbitt	Optimizing the response surface of stochastic systems by measure-valued differentiation

* Reviewer

Supervisor	Author	Title
Benedikt M. Pötscher	David Preinerstorfer	Autocorrelation robust testing in time series regression models
Erhard Reschenhofer	Georg Valentin Lehecka	Value and effects of public information and effects of the financialization on commodity futures market

4.2.2 PhD Theses Finished

Supervisor	Author	Title
Immanuel Bomze, Walter J. Gutjahr*	Peter Putz	Fiber to the home, cost optimal design of last-mile broadband telecommunication networks
Immanuel Bomze, Ivana Ljubic*, Walter J. Gutjahr*	Stefan Gollowitzer	Mixed integer programming approaches to problems combining network design and facility location
Hannes Leeb	Nina Senitschnig	Shrinkage methods for prediction out-of-sample: performance and selection of estimators
Erhard Reschenhofer	Jürgen Holl	Stochastic unit-root models in economics - Essays on testing, estimating and forecasting

4.2.3 Master Theses in Progress

Supervisor	Author	Title
Ivana Ljubic, Markus Leitner	Max Resch (TU Vienna)	Parallel solving of the (prize-collecting) Steiner tree problem in graphs through partitioning
Ivana Ljubic, Markus Leitner, Mario Ruthmair (TU Vienna)	Martin Riedler (TU Vienna)	Exact approaches for the network design problem with relays
Markus Leitner, Günther R. Raidl (TU Vienna), Mario Ruthmair (TU Vienna)	Georg Brandstätter (TU Vienna)	Solving the multi-objective Steiner tree problem with resources
Erhard Reschenhofer	Stefan Mück	Applications of the dynamic conditional correlation model
Erhard Reschenhofer	Martin Ruzek	Comparison of regular FX trading and FX option trading

* Reviewer

4.2.4 Master Theses Finished

Supervisor	Author	Title
Andreas Futschik	Thomas Glaser	Weighting procedures to counter unit nonresponse bias of estimators for sample surveys
Andreas Futschik	Bernhard Hammer	Statistical models for time use data
Walter J. Gutjahr	Carina Huber	Einwohnerverhaltensbezogene Modellformulierungen für das Touren-optimierungsproblem in der Katastrophen-hilfslogistik
Walter J. Gutjahr	Michael Zehetner	Optimization of the bi-objective stochastic covering tour problem using NSGA-II
Markus Leitner, Günther R. Raidl (TU Vienna), Mario Ruthmair (TU Vienna)	Roman Karl (TU Vienna)	The rooted delay-constrained Steiner tree problem with uncertain delays
Markus Leitner, Günther R. Raidl (TU Vienna)	Thomas Petelin (TU Vienna)	Two-phase local search for the bi-objective connected facility location problem
Ivana Ljubic, Markus Leitner	Martin Luipersbeck (TU Vienna)	A new partition-based heuristic for the Steiner tree problem in large graphs
Georg Pflug	Katja Hörtrich	Modeling of systemic risk
Erhard Reschenhofer	Denise Mannen	Preis- und Lohnentwicklung in langfristiger Perspektive: Bauarbeiterlöhne und Weizenpreise in London 1301–1913
Erhard Reschenhofer	Carina Steindl	Model selection criteria for the estimation of structural breaks
Erhard Reschenhofer	Kevin Windisch	Portfoliooptimierung nach Markowitz im Vergleich zur Optimierung mit robusten Schätzern und naiver Diversifikation

4.2.5 Bachelor Theses

Immanuel Bomze (6), Andreas Futschik (1), Raimund M. Kovacevic (2), Georg Pflug (1), Erhard Reschenhofer (2)

5 Publications

5.1 Monographs

Kovacevic, **Raimund M.**, **Pflug**, **Georg Ch.**, Vespucci, Maria T. (Eds): Handbook of Risk Management in Energy Production and Trading. International Series in Operations Research and Management Science. Springer Verlag, New York, 2013.

5.2 Journal Articles

Aeschbacher, Simon, **Futschik***,* **Andreas**, Beaumont, Mark: Approximate Bayesian computation for modular inference problems with many parameters: the example of migration rates. *Molecular Ecology* **22** (4), 987-1002, 2013.

Alvarez-Miranda, Eduardo, **Ljubic**, **Ivana**, Toth, Paolo: A Note on the Bertsimas and Sim Algorithm for Robust Combinatorial Optimization Problems. *4OR* **11** (4), 349-360, 2013.

Alvarez-Miranda, Eduardo, **Ljubic**, **Ivana**, Toth, Paolo: Exact Approaches for Solving Robust Prize-Collecting Steiner Tree Problems. *European Journal of Operational Research* **229** (3), 599-612, 2013.

Amaral, Paula, **Bomze**, **Immanuel**, Júdice, Joaquim: Copositivity and constrained fractional quadratic problems. *Mathematical Programming* (available online since June 2013, DOI: 10.1007/s10107-013-0690-8).

Bastide, Heloise, Betancourt, Andrea, Nolte, Viola, Tobler, Ray, Stoebe, Patricia, **Futschik**, **Andreas**, Schlötterer, Christian: A Genome-Wide, Fine-Scale Map of Natural Pigmentation Variation in Drosophila melanogaster. *PLoS Genetics* **9** (6), e1003534, 2013.

Bley, Andreas, **Ljubic**, **Ivana**, Maurer, Olaf: Lagrangian Decompositions for the Two-Level FTTx Network Design Problem. *EURO Journal on Computational Optimization* **1** (3), 221-252, 2013.

Boitard, Simon, Kofler, Robert, Françoise, Pierre, Robelin, David, Schlötterer, Christian, **Futschik**, **Andreas**: Pool-hmm: a Python program for the detection of selective sweeps from pooled next generation sequencing samples. *Molecular Ecology Resources* **13** (2), 337-340, 2013.

Bomze, **Immanuel**, Eichfelder, Gabriele: Copositivity detection by difference-of-convex decomposition and omega-subdivision. *Mathematical Programming* **138** (1-2), 365-400, 2013.

Bomze, **Immanuel**, **Gollowitzer**, **Stefan**, Yildirim, Emre Alper: Rounding on the standard simplex: regular grids for global optimization. *Journal of Global Optimization* (available online since 17th Dec 2013, DOI: 10.1007/s10898-013-0126-2).

Dickinson, **Peter J.C.**, Eichfelder, Gabriele, Povh, Janez: Erratum to: On the set-semidefinite representation of nonconvex quadratic programs over arbitrary feasible sets. *Optimization Letters* **7** (6), 1387-1397, 2013.

Dickinson, **Peter J.C.**, Povh, Janez: Moment Approximations for Set-Semidefinite Polynomials. *Journal of Optimization Theory and Applications* **159** (1), 57-68, 2013.

Dickinson, **Peter J.C.**, Dür, Mirjam, Gijben, Luuk, Hildebrand, Roland: Scaling relationship between the copositive cone and Parrilo's first level approximation. *Optimization Letters* **7** (8), 1669-1679, 2013.

Engau, Alexander, Anjos, Miguel F., **Bomze**, **Immanuel**: Constraint Selection in a Build-Up Interior-Point Cutting-Plane Method for Solving Relaxations of the Stable-Set Problem. *Mathematical Methods of Operations Research* **78** (1), 35-59, 2013.

Faisal, Muhammed, **Futschik**, **Andreas**, Hussain, Ibrahin: A New Approach to Choose Acceptance Cutoff for Approximate Bayesian Computation. *Journal of Applied Statistics* **40** (4), 862-869, 2013.

Gollowitzer, **Stefan**, Gendron, Bernard, **Ljubic**, **Ivana**: A cutting plane algorithm for the capacitated connected facility location problem. *Computational Optimization and Applications* **55** (3), 647-674, 2013.

Gollowitzer, **Stefan**, Gouveia, Luis, **Ljubic**, **Ivana**: Enhanced Formulations and Branch-and-Cut for the Two Level Network Design Problem with Transition Facilities. *European Journal of Operational Research* **225** (2), 211-222, 2013.

Groß-Klußmann, Axel, **Hautsch**, **Nikolaus**: Predicting Bid-Ask Spreads Using Long Memory Autoregressive Conditional Poisson Models. *Journal of Forecasting* **32**, 724-742, 2013.

Gutjahr, **Walter J.**, Froeschl, Karl A.: Project portfolio selection under uncertainty with outsourcing opportunities. *Flexible Services and Manufacturing Journal* **25**, 255-281, 2013.

Hautsch, **Nikolaus**, Podolskij, Mark: Pre-Averaging Based Estimation of Quadratic Variation in the Presence of Noise and Jumps: Theory, Implementation, and Empirical Evidence. *Journal of Business and Economic Statistics* **31**, 165-183, 2013.

Huber, **Nina**, **Leeb**, **Hannes**: Shrinkage estimators for prediction out-of-sample: Conditional performance. *Communications in Statistics: Theory and Methods* **42** (7), 1245-1263, 2013.

Kovacevic, **Raimund M.**, Paraschiv, Florentina: Medium-Term Planning for Thermal Electricity Production. *OR Spectrum* (available online since 20th August 2013, DOI: 10.1007/s00291-013-0340-9).

Leeb, **Hannes**: On the conditional distributions of low-dimensional projections from high-dimensional data. *Annals of Statistics* **41** (2), 464-483, 2013.

Leeb, **Hannes**: Online supplement to "On the conditional distribution of low- dimensional projections from high-dimensional data". *Annals of Statistics* **41** (2), 464-483, 2013 (DOI:10.1214/12-AOS1081SUPP, 1-41).

Lin, Kao, **Futschik**, **Andreas**, Li, Haipeng: A fast estimate for the population recombination rate based on regression. *Genetics* **194** (2), 473-484, 2013.

Ljubic, **Ivana**, **Gollowitzer**, **Stefan**: Layered Graph Approaches to the Hop Constrained Connected Facility Location Problem. *INFORMS Journal on Computing* **25** (2), 256-270, 2013.

Pandey, Ram, Franssen, Susanne, **Futschik**, **Andreas**, Schlötterer, Christian: Allelic imbalance meter (Allim), a new tool for measuring allele specific gene expression. *Molecular Ecology Resources* **13** (4), 740-745, 2013.

Pflug, **Georg Ch.**, Wets, Roger B.: Shape restricted nonparametric regression with overall noisy measurements. *Journal of Nonparametric Statistics* **25** (2), 323-338, 2013.

Pötscher, **Benedikt M.**: On the Order of Magnitude of Sums of Negative Powers of Integrated Processes. *Econometric Theory* **29**, 642-658, 2013.

Reschenhofer, **Erhard**, Lingler, M.: Detecting synchronous cycles in financial time series of unequal length. *Journal of Empirical Finance* **24**, 1-9, 2013.

Reschenhofer, **Erhard**, **Preinerstorfer**, **David**, **Steinberger**, **Lukas**: Non-monotonic penalizing for the number of structural breaks. *Computational Statistics* **28** (6), 2585-2598, 2013.

Reschenhofer, **Erhard**, Windisch, Kevin: Further evidence of deficiencies in classical finance. *Journal of Applied Finance and Banking* **3** (6), 1-24, 2013.

Reschenhofer, **Erhard**: Does anyone need a GARCH(1,1)? *Journal of Finance and Accounting* **1**, 48-53, 2013.

Reschenhofer, **Erhard**: Linear scale dilation of asset returns. *American Journal of Theoretical and Applied Statistics* **2** (2), 38-42, 2013.

Reschenhofer, **Erhard**: Log-periodogram regression with odd Fourier frequencies. *InterStat* **July, 2013** # 004, 2013.

Reschenhofer, **Erhard**: Robust testing for stationarity of global surface temperature. *Journal of Applied Statistics* **40** (6), 1349-1361, 2013.

Reschenhofer, **Erhard**: Simple approximations for the distribution of the range of a Brownian motion. *Journal of Statistical and Econometric Methods* **2** (3), 1-6, 2013.

Reschenhofer, **Erhard**: Using intraday statistics for the estimation of the return variance. *Journal of Finance and Investment Analysis* **2** (2), 1-13, 2013.

Shaked-Monderer, Naomi, Berman, Abraham, **Bomze**, **Immanuel M**., Jarre, Florian, **Schachinger**, **Werner**: New results on the cp rank and related properties of co(mpletely)positive matrices. *Linear and Multilinear Algebra* (available online since 12th Feb 2014, DOI: 10.1080/03081087.2013.869591).

Shaked-Monderer, Naomi, **Bomze**, **Immanuel**, Jarre, Florian, **Schachinger**, **Werner**: On the cp-rank and minimal cp factorizations of a completely positive matrix. *SIAM Journal on Matrix Analysis and Applications* **34**, 355-368, 2013.

Szabo, S., Barth, K., Graml, C., **Futschik**, **Andreas**, Palme, R., Waiblinger, Susanne: Introducing young dairy goats into the adult herd after parturition reduces social stress. *Journal of dairy science* **96** (9), 5644-5655, 2013.

Wagner, Karin, Barth, Kerstin, Hillmann, Edna, Palme, Rupert, **Futschik**, **Andreas**, Waiblinger, Susanne: Mother rearing of dairy calves: Reactions to isolation and to confrontation with an unfamiliar conspecific in a new environment. *Applied Animal Behaviour Science* **147** (1-2), 43-54, 2013.

5.3 Contributions to Proceedings and Edited Books

Alvarez-Miranda, Eduardo, **Ljubic**, **Ivana**, Mutzel, Petra: The Rooted Maximum Node-Weight Connected Subgraph Problem. In: Gomes, Carla, Sellmann, Meinolf (Eds.): *Integration of AI and OR Techniques in Constraint Programming for Combinatorial Optimization Problems: Proceedings of the10th International Conference (CPAIOR 2013). Lecture Notes in Computer Science* **7874**, 300-315, 2013.

Gross, **Peter**, **Kovacevic**, **Raimund M.**, **Pflug**, **Georg Ch**.: Energy Markets. Chapter 1. In: Kovacevic, Raimund M., Pflug, Georg Ch., Vespucci, M. T. (Eds): *Handbook of Risk Management in Energy Production and Trading. International Series in Operations Research and Management Science*. Springer Verlag, 2013.

Kovacevic, **Raimund M.**, **Pflug**, **Georg Ch.**: Pricing of Energy Contracts – from Replication Pricing to Swing Options. Chapter 15. In: Kovacevic, Raimund M., Pflug, Georg Ch., Vespucci, M. T. (Eds.): *Handbook of Risk Management in Energy Production and Trading. International Series in Operations Research and Management Science*. Springer Verlag, 2013.

Leitner, **Markus**, **Ljubic**, **Ivana**, **Sinnl**, **Markus**, Werner, Axel: On the two-architecture connected facility location problem. In: *INOC 2013. Electronic Notes in Discrete Mathematics* **41**, 359-366, 2013.

Leitner, **Markus**, **Ljubic**, **Ivana**, **Sinnl**, **Markus**: Solving the bi-objective prize-collecting Steiner tree problem with the e-constraint method. In: *INOC 2013. Electronic Notes in Discrete Mathematics* **41**, 181-188, 2013.

Ljubic, **Ivana**, Mutzel, Petra, Zey, Bernd: Stochastic Survivable Network Design Problems. In: *INOC 2013. Electronic Notes in Discrete Mathematics* **41**, 245-252, 2013.

5.4 Technical Reports and Working Papers

Bomze, **Immanuel**, Overton, Michael L.: Narrowing the difficulty gap for the Celis-Dennis-Tapia problem: Preprint NI13063-POP, Isaac Newton Institute for Mathematical Sciences, University of Cambridge, UK.

Bomze, **Immanuel**: Copositive relaxation beats Lagrangian dual bounds in quadratically and linearly constrained QPs: Preprint NI13064-POP, Isaac Newton Institute for Mathematical Sciences, University of Cambridge, UK.

Bomze, **Immanuel**: Copositivity for second-order optimality conditions in general smooth optimization problems: Preprint NI13033-POP, Isaac Newton Institute for Mathematical Sciences, University of Cambridge, UK.

Cordero, Fernando, **Klein**, **Irene**, Perez-Ostafe, Lavinia: Asymptotic proportion of arbitrage points in fractional binary markets (submitted).

Dickinson, **Peter J.C.**, Povh, Janez: New linear and positive semidefinite based approximation hierarchies for polynomial optimisation. Submitted to: *Mathematical Programming: Series B*.

Gouveia, Luis, **Leitner**, **Markus**, **Ljubić**, **Ivana**: Hop constrained Steiner trees with multiple root nodes. To appear in: *European Journal of Operational Research*.

Gouveia, Luis, **Leitner**, **Markus**, **Ljubić**, **Ivana**: The two-level diameter constrained spanning tree problem. To appear in: *Mathematical Programming*.

Gutjahr, **Walter J.**: Bivariate stochastic dominance under linear transaction costs (submitted).

Gutjahr, **Walter J.**: Project selection under skill development (accepted).

Härdle, Wolfgang, **Hautsch**, **Nikolaus**, Mihoci, Andrija: Local Adaptive Multiplicative Error Models for High-Frequency Forecasts. To appear in: *Journal of Applied Econometrics*.

Hautsch, **Nikolaus**, Kyj, Lada M., Malec, Peter: Do High-Frequency Data Improve High-Dimensional Portfolio Allocation? To appear in: *Journal of Applied Econometrics*.

Hautsch, **Nikolaus**, Ristig, Alexander, Okhrin, Ostap: Efficient Iterative Maximum Likelihood Estimation of High-Parameterized Time Series Models. *Discussion Paper 2014-010, CRC 649*, Berlin, 2014.

Hautsch, **Nikolaus**, Schaumburg, Julia, Schienle, Melanie: Capturing the Zero: Forecasting Systemic Impact in Financial Networks. To appear in: *Journal of International Forecasting*.

Hautsch, **Nikolaus**, Schienle, Melanie, Malec, Peter: Capturing the Zero: A New Class of Zero-Augmented Distributions and Multiplicative Error Processes. To appear in: *Journal of Financial Econometrics*.

Klein, **Irene**, Schmidt, Thorsten, Teichmann, Josef: When roll-overs do not qualify as numeraire: bond markets beyond short rate paradigms (submitted).

Leeb, **Hannes**, **Poetscher**, **Benedikt M**., Ewald, Karl: On various confidence intervals after model selection (submitted; also published on ArXiV, ID arXiv:1401.2267).

Leeb, **Hannes**, **Poetscher**, **Benedikt M**.: Testing in the Presence of Nuisance Parameters: Some Comments on Tests Post-Model-Selection and Random Critical Values (submitted; also published on ArXiV, ID arXiv:1209.4543).

Leitner, **Markus**, **Ljubić**, **Ivana**, Luipersbeck, Martin, Prossegger, Markus, Resch, Max: New real-world instances for the Steiner tree problem in graphs.

Leitner, **Markus**, **Ljubić**, **Ivana**, **Sinnl**, **Markus**: The bi-objective prize-collecting Steiner tree problem. Submitted to: *INFORMS Journal on Computing*.

Pötscher, **Benedikt M**., **Preinerstorfer**, **David**: On the Size and Power of Heteroskedasticity and Autocorrelation Robust Test in Time Series Regression (working paper).

Rath, Stefan, Gendreau, Michel, **Gutjahr**, **Walter J**.: Bi-objective stochastic programming models for determining depot locations in disaster relief operations planning (submitted).

Reschenhofer, **Erhard**, Ploberger, W., Lehecka, Georg V.: Detecting fuzzy periodic patterns in futures spreads. To appear in: *Statistical Papers* **55**, 2014.

Steinberger, **Lukas**, **Leeb**, **Hannes**: On conditional moments of high-dimensional random vectors given lower-dimensional projections (in preparation).

6 Presentations

6.1 Conference Presentations

	Conference	Title of Presentation
Johanna Bertl	ABC in Rome, Rome, Italy	Approximate Maximum Likelihood Inference for Coalescent Models (poster)
Johanna Bertl	Annual Conference of the Society for Molecular Biology and Evolution, Chicago, USA	Approximate Maximum Likelihood Inference for Population Genetic Models (poster)
Johanna Bertl	29th European Meeting of Statisticians, Budapest, Hungary	Approximate Maximum Likelihood Inference for Population Genetics
Johanna Bertl	Österreichische Statistiktage (Meeting of the Austrian Statistical Society), Vienna, Austria	Approximate Maximum Likelihood Inference for Population Genetics
Johanna Bertl	Mind the Gap 4, Vienna, Austria	Can secondary contact occurring after post-glacial expansion be distinguished from barriers to gene flow? (poster)
Immanuel M. Bomze	LANCS International Workshop on Discrete and Nonlinear Optimisation, Cardiff, UK (invited plenary)	A nasty cone with nice properties – new issues in copositive optimization
Immanuel M. Bomze	EUROPT 2013 (11th EUROPT Workshop on Advances in Continuous Optimization), Florence, Italy (invited stream organizer, invited talk)	Standard nonlinear optimization
Immanuel M. Bomze	EURO-INFORMS MMXIII (26th European Conference on Operational Research), Rome, Italy (invited stream organizer, invited talk)	Copositivity-based approximations for mixed-binary and ternary fractional quadratic optimization
Immanuel M. Bomze	Polynomial Optimisation (POP events), Cambridge, UK (invited talk)	Narrowing the difficulty gap for the Celis-Dennis-Tapia problem
Immanuel M. Bomze	Polynomial Optimisation (POP events), Cambridge, UK (invited talk)	A nasty cone with nice properties – new issues in copositive optimization
Immanuel M. Bomze	ICCOPT 2013 (International Conference on Continuous Optimization), Lisbon, Portugal (invited session organizer, invited talk)	Narrowing the difficulty gap for the Celis-Dennis-Tapia problem

	Conference	Title of Presentation
Immanuel M. Bomze	COST Workshop on MINLP 2013, Paris, France (invited plenary)	A nasty cone with nice properties – new issues in copositive optimization
Peter J.C. Dickinson	DIAMANT Symposium, Heeze, The Netherlands (invited plenary speaker)	Applications and Approximations for Copositive Optimisation
Peter J.C. Dickinson	EUROPT 2013 (11th EUROPT Workshop on Advances in Continuous Optimization), Florence, Italy	On a set-semidefinite representation of quadratic optimisation problems
Peter J.C. Dickinson	Polynomial Optimisation Workshop, Cambridge, UK (invited)	A new convex reformulation and approximation hierarchy for polynomial optimisation
Peter J.C. Dickinson	Polynomial Optimisation Programme, Cambridge, UK (invited)	On the set-copositive cone
Walter J. Gutjahr	MCDM 2013 (22nd International Conference on Multiple Criteria Decision Making), Málaga, Spain	Risk-Averse Bi-Objective Optimization via Stochastic Dominance under Transaction Costs
Walter J. Gutjahr	EURO-INFORMS MMXIII (26th European Conference on Operational Research), Rome, Italy	Risk Aversion in Stochastic Multi-Mode Resource-Constrained Project Scheduling
Nikolaus Hautsch	Conference "Statistics for Stochastic Processes and Analysis of High Frequency Data", University Pierre and Marie Curie, Paris, France (invited)	Local Method of Moments Estimation of Integrated and Spot Covariation
Nikolaus Hautsch	Workshop "Measuring and Modeling Financial Risk with High Frequency Data", European University Institute, Florence, Italy (invited)	Local Method of Moments Estimation of Integrated and Spot Covariation
Nikolaus Hautsch	Financial Econometrics Conference, Toulouse School of Economics, Toulouse, France (invited)	Discussion of a paper
Raimund M. Kovacevic	ICSP 2013 (International Conference on Stochastic Programming), Bergamo, Italy (invited)	Pricing of Energy Contracts - from Replication Pricing to Swing Options
Raimund M. Kovacevic	EUROPT 2013 (11th EUROPT Workshop on Advances in Continuous Optimization), Florence, Italy (invited)	Optimality Conditions and Solution Algorithms for Multistage Stochastic Bilevel Problems
Raimund M. Kovacevic	Workshop on Risk Management in Energy Production and Trading, Vienna, Austria (invited)	Pricing of Energy Contracts - from Replication Pricing to Swing Options

	Conference	Title of Presentation
Hannes Leeb	CFE 2013 (7^{th} International Conference on Computational and Financial Econometrics), University of London, UK	Conditional predictive inference post model selection
Hannes Leeb	29^{th} European Meeting of Statisticians, Eötvös Lorand University, Budapest, Hungary (invited)	On the conditional distribution of low-dimensional projections from high-dimensional data
Hannes Leeb	Workshop in Honor of Jan Magnus' Valedictory Address, Tilburg University, The Netherlands (invited)	On the conditional distribution of low-dimensional projections from high-dimensional data
Ivana Ljubic	EURO-INFORMS Joint International Meeting 2013, Rome, Italy	The Maximum Weight Connected Subgraph Problem
Georg Pflug	Workshop on Scenario Generation for Financial Optimization, Bozen, Italy (invited)	Scenario tree generation from simulations
Georg Pflug	Workshop on Simulation-Optimization, Valparaiso, Chile (invited)	Measure-valued derivatives in simulation-optimization
Georg Pflug	Mini-Conference, Bonn, Germany (invited)	Time consistency in stochastic optimization
Georg Pflug	EUROPT 2013 (11^{th} EUROPT Workshop on Advances in Continuous Optimization), Florence, Italy	Stochastic bilevel programs: Models and structures
Benedikt M. Pötscher	Conference on Recent Advances in Time Series and Econometrics, ECARES, Université Libre de Bruxelles (ULB), Brussels, Belgium (invited)	On the Size and Power of Heteroskedasticity and Autocorrelation Robust Test in Time Series Regression
Benedikt M. Pötscher	CFE 2013 (7^{th} International Conference on Computational and Financial Econometrics), University of London, UK (invited)	Inference Post-Model Selection
Benedikt M. Pötscher	29^{th} European Meeting of Statisticians, Eötvös Lorand University, Budapest, Hungary (contributed)	On the Order of Magnitude of Sums of Negative Powers of Integrated Processes
David Preinerstorfer	CFE 2013 (7^{th} International Conference on Computational and Financial Econometrics), University of London, UK	On Size and Power of Heteroscedasticity and Autocorrelation Robust Tests

	Conference	Title of Presentation
David Preinerstorfer	29th European Meeting of Statisticians, Eötvös Lorand University, Budapest, Hungary	On Size and Power of Heteroscedasticity and Autocorrelation Robust Tests
Werner Schachinger	EUROPT 2013 (11th EUROPT Workshop on Advances in Continuous Optimization), Florence, Italy	Duality and attainability in copositive optimization
Nina Senitschnig	29th European Meeting of Statisticians, Eötvös Lorand University, Budapest, Hungary	Selection of shrinkage estimators for prediction out-of-sample
Nina Senitschnig	Joint Statistical Meetings, Montreal, Canada	Selection of shrinkage estimators for prediction out-of-sample
Lukas Steinberger	29th European Meeting of Statisticians, Eötvös Lorand University, Budapest, Hungary	Statistical inference when fitting simple models to high-dimensional data
Lukas Steinberger	Joint Statistical Meetings, Montreal, Canada	Statistical inference when fitting simple models to high-dimensional data
Lukas Steinberger	18th European Young Statisticians Meeting, Osijek, Croatia	Statistical inference when fitting simple models to high-dimensional data

6.2 Outside Seminar Presentations

	Institution	Title
Immanuel M. Bomze	University of Goettingen, Germany	The simplest of the hard optimization problems
Immanuel M. Bomze	Koç University, Istanbul, Turkey	A nasty cone with nice properties - new issues in copositive optimization
Immanuel M. Bomze	University of Groningen (Rijksuniversiteit Groningen), The Netherlands	New results on CP matrices and applications in copositive optimization
Immanuel M. Bomze	University of Edinburgh, UK	Infection-Immunization Dynamics for solving Standard Quadratic Optimization Problems
Immanuel M. Bomze	Courant Institute, New York University, USA	A nasty cone with nice properties - new issues in copositive optimization
Immanuel M. Bomze	Princeton University, USA	A nasty cone with nice properties - new issues in copositive optimization

	Institution	Title
Immanuel M. Bomze	Lehigh University, Bethlehem, PA, USA	Copositive relaxation beats Lagrangian dual bounds in quadratically and linearly constrained QPs
Immanuel M. Bomze	Laboratoire de Recherche en Informatique (LRI), University of Paris Sud, Gif-sur-Yvette, France	Copositive relaxation beats Lagrangian dual bounds in quadratically and linearly constrained QPs
Peter J.C. Dickinson	University of Edinburgh, UK	On a set-semidefinite representation of quadratic optimisation problems
Peter J.C. Dickinson	CWI (Centrum Wiskunde & Informatica), Amsterdam, The Netherlands	Applications and Approximations for Copositive Optimisation
Peter J.C. Dickinson	University of Klagenfurt, Austria	Applications and Approximations for Copositive Optimisation
Nikolaus Hautsch	University of Pennsylvania, Philadelphia, USA	Local Method of Moments Estimation of Integrated and Spot Covariation
Hannes Leeb	Yale University, Statistics Department, New Haven, USA	On the conditional distribution of low-dimensional projections from high-dimensional data
Hannes Leeb	University of Pennsylvania, Statistics Department, Philadelphia, USA	On the conditional distribution of low-dimensional projections from high-dimensional data
Hannes Leeb	Rutgers University, Statistics Department, New Jersey, USA	On the conditional distribution of low-dimensional projections from high-dimensional data
Ivana Ljubic	The Centre for Bioinformatics, Biomarker Discovery and Information-Based Medicine (CIBM), University of Newcastle, Australia	The Maximum Weight Connected Subgraph Problem: Applications in Bioinformatics
Georg Pflug	IMPA, Rio de Janeiro, Brazil (invited)	Time consistency in dynamic Stochastic Optimization
Georg Pflug	Imperial College, London, UK (invited)	Time consistency in dynamic Stochastic Optimization
Georg Pflug	HEC Montreal, Canada (invited)	Approximation of multistage stochastic programs
Georg Pflug	University of Bergamo, Italy (invited)	Tutorial on scenario generation
Georg Pflug	University of Bergamo, Italy (invited)	Decision dependent probabilities and the response surface method

	Institution	Title
Benedikt M. Pötscher	CREATES, Aarhus University, Denmark	On the Size and Power of Heteroskedasticity and Autocorrelation Robust Test in Time Series Regression

6.3 Departmental Seminars

Rüdiger Frey (Vienna University of Economics and Business): Portfolio Optimization under Partial Information with Expert Opinions (January, 07)

Davy Paindaveine (Université Libre de Bruxelles): Local Multiple-Output Quantile Regression (January, 14)

Eric Laas-Nesbitt (University of Vienna): Optimizing the response surface of stochastic systems by measure-valued differentiation (January, 21)

Markus Sinnl (University of Vienna): Bi-objective optimization for telecommunication networks (January, 21)

Gilles Blanchard (University of Potsdam): Multiple testing over a continuous domain of null hypotheses (March, 04)

Werner Brannath (University of Bremen): A new class of powerful and informative simultaneous confidence intervals (March, 18)

Luis Gouveia (University of Lisbon): On a Formulation for the (Time-Dependent) Travelling Salesman Problem (April, 22)

Roman Slovinski (Poznan University of Technology): Knowledge Discovery from Vague Data using Dominance-based Rough Set Approach (April, 29)

Jiri Outrata (Czech Academy of Sciences, Prague): Mathematical programs with equilibrium constraint (May, 13)

Martin Posch (Medical University of Vienna): Graphical approaches to construct multiple testing procedures and extensions to adaptive designs (May, 27)

Yuri Nesterov (CORE, Université catholique de Louvain): Dual Methods for minimizing functions with bounded variation (June, 03)

Peter J.C. Dickinson (University of Vienna): Applications and approximations for copositive optimisation (June, 10)

Paul Kabaila (La Trobe University, Melbourne): On a paradox in decision-theoretic interval estimation (June, 17)

Johannes Klotz (Statistics Austria, Vienna): Statistical models for aggregate migration counts (June, 24)

Taitsuke Otsu (London School of Economics): Extending the scope of cube root asymptotics (with Myung Hwan Seo, LSE) (October, 07)

Torsten Hothorn (University of Zurich): Conditional Transformation Models (October, 14)

Margaret H. Wright (New York University): A status report (including open questions) about the Nelder-Mead method for derivative-free optimization (October, 21)

Maarten Jansen (Université Libre de Bruxelles): Information criteria for use under sparsity (October, 28)

Catherine Matias (CNRS, France): On efficient estimators of the proportion of true null hypotheses in a multiple testing setup (Joint work with Van Hanh Nguyen) (November, 04)

Yaacov Ritov (Hebrew University of Jerusalem): On asymptotically optimal confidence regions and tests for high-dimensional models (with Sara van de Geer, Peter Buehlmann) (November, 18)

Arnold Janssen (University of Duesseldorf): Dynamic adaptive multiple tests with finite sample "false discovery rate" control -Robust adaptivity- (November, 25)

Juan-José Salazar-González (University of La Laguna): Models and algorithms for an integrated fleet-assignment, aircraft-routing and crew-pairing problem (December, 02)

Anita Schoebel (University of Goettingen): Integrated traffic planning: Line planning and timetabling revisited (December, 09)

7 Grants and Projects

Maarten Jansen (Project-Coordinator) Hannes Leeb (Co-Investigator) Research Associates: Benedikt Pötscher	Vienna Graduate School of Economics, funded by FWF, 2010-2014
Nikolaus Hautsch (Sub-Project Coordinator) Research Associates: Peter Malec, Markus Bibinger	Econometric Modelling of Liquidity Risks, Transaction Risks, and Trading Costs, within the Collaborative Research Center 649, “Economic Risk”, Humboldt-Universität zu Berlin, funded by Deutsche Forschungsgemeinschaft, 2007-2013
Nikolaus Hautsch (Project Coordinator)	Impact and Risks of High-Frequency Trading on Global Equity Markets, funded by Fritz Thyssen Stiftung, 2012-2014
Ivana Ljubic (Project-Coordinator/Principal Investigator)	Network Design Under Uncertainty: Algorithmic Aspects of Stochastic and Robust Optimization – APART Fellowship, funded by ÖAW, 2011-2013
Ivana Ljubic (Project-Coordinator) Research Associate: Markus Leitner (Post-Doc)	Multi-Criteria Optimization of FTTx Networks, funded by FWF, 2012-2015
Georg Pflug (Project-Coordinator) Research Associate: Anna Timonina	Approximation and convergence in multi-stage stochastic optimization with application to finance and energy, funded by FWF, 2010-2013
Georg Pflug (Project-Coordinator) Research Associates: David Hirschmann, Raimund Kovacevic, Bita Analui	Energy Policies and Risk Management for the 21st Century, funded by WWTF, 2010-2013
Christian Schlötterer (Project-Coordinator) Research Associate: Andreas Futschik	Doktoratskolleg Populationsgenetik, funded by FWF, 2010-2014

8 Research Stays at Other Institutions

	Institution	Research Topic	Weeks
Johanna Bertl	Laboratoire TIMC-IMAG, Université Joseph Fourier, Grenoble, France	The molecular pattern of secondary contact after post-glacial expansion	3
Hannes Leeb	Rutgers University, New Jersey, USA	Shrinkage estimation	1
Hannes Leeb	The Wharton School, University of Pennsylvania, Philadelphia, USA	Inference post-model-selection	1
Irene Klein	ETH Zurich, Switzerland	Bond markets	0,5
Markus Leitner	University of Lisbon, Portugal	Diameter constrained spanning trees	1
Ivana Ljubic	COGA Group, TU Berlin, Germany	Optimization of FTTx Networks	20

9 Other Faculty Activities

9.1 Editorial Activities

Immanuel M. Bomze

- Advances in Data Analysis and Classification (Member of Editorial Board)
- Central European Journal of Operations Research (Member of Editorial Board)
- European Journal of Operational Research (Editor)
- Journal of Global Optimization (Member of Editorial Board)
- Optimization Letters (Member of Editorial Board)
- Operations Research Perspectives (Member of Editorial Board)

Walter J. Gutjahr

- Advances in Operations Research (Member of Editorial Board)
- Central European Journal of Operations Research (Associate Editor)
- EURO Journal on Decision Processes (Member of Editorial Board)
- OR Spectrum (Member of Editorial Advisory Board)
- Swarm Intelligence (Member of Editorial Board)

Nikolaus Hautsch

- Journal of Financial Econometrics (Associate Editor)
- Empirical Economics (Associate Editor)
- Econometrics (Member of Editorial Board)

Hannes Leeb

- Sankhya A (Co-Editor)

Georg Pflug
- Austrian Journal of Statistics (Associate Editor)
- Central European Journal of Operations Research (Associate Editor)
- Computational Management Science (Associate Editor)
- Computational Optimization and Applications (Associate Editor)
- Financial Mathematics and Applications
- Energy Systems: Optimization, Modeling, Simulation and Economic Aspects (Associate Editor)
- Journal of Stochastic Analysis (Associate Editor)
- Operations Research (Associate Editor)
- Statistics and Risk Modeling (Editor-in-Chief)

Benedikt M. Pötscher
- Econometric Theory (Co-Editor)
- Journal of Econometrics (Associate Editor)
- Journal of Statistical Planning and Inference (Associate Editor)

9.2 Refereeing[2]

Peter J.C. Dickinson
- Computational Optimization and Applications (1)
- Linear Algebra and its Applications (1)
- SIAM Journal on Optimization (1)

Andreas Futschik
- Austrian Journal of Statistics (1)
- Genetics (1)
- Molecular Ecology (1)
- Statistical Applications in Genetics and Molecular Biology (1)
- Statistical Science (1)
- Statistics and Probability Letters (1)

Walter J. Gutjahr
- Annals of Operations Research (1)
- Central European Journal of Operations Research (1)
- Computers and Industrial Engineering (1)
- European Journal of Operational Research (3)
- European Research Council (3)
- Evolutionary Computation (1)
- International Journal of Production Research (2)
- International Transactions in Operations Research (1)
- Journal of Multicriteria Decision Analysis (1)
- Mathematical Problems in Engineering (2)
- Omega (1)
- Operations Research (1)
- Optimization (1)
- OR Spectrum (1)
- Socio-Economic Planning Sciences (1)
- Theoretical Computer Science (1)

[2] incomplete list

Nikolaus Hautsch	• Danish Agency for Science Technology and Innovation • Journal of Banking and Finance (2) • Journal of Business and Economic Statistics (2) • Journal of Econometrics (1) • Journal of Finance (1) • Review of Asset Pricing Studies (1)
Irene Klein	• European Journal of Operational Research (1) • Mathematical Finance (1)
Hannes Leeb	• Annals of Statistics (1) • Biometrika (1) • Communications in Statistics - Theory and Methods (1) • Econometric Reviews (1) • Econometric Theory (1) • Journal of Statistical Planning and Inference (1) • Journal of The Royal Statistical Society - B (2) • Scandinavian Journal of Statistics (1) • United States - Israel Binational Science Foundation (1)
Markus Leitner	• Computers & Operations Research (1) • European Journal of Operational Research (1) • IIE Transactions (1)
Ivana Ljubic	• 4OR (1) • Computers & Operations Research (2) • Discrete Optimization (1) • Euro Journal on Computational Optimization (1) • European Journal on Operations Research (1) • INFORMS Journal on Computing (1) • Management Science (1) • Networks (1) • Operations Research Letters (1) • Reviewer for IPCO 2014 (1) • Reviewer for SEA 2013 (1)
Benedikt M. Pötscher	• Annals of Statistics • Biometrika • Econometric Theory • Econometrica • Journal of the Royal Statistical Society-Series B
David Preinerstorfer	• Econometric Theory (1)
Werner Schachinger	• Journal of Global Optimization

9.3 Public Relations Activities

Nikolaus Hautsch	Interview on High-Frequency Trading, Deutschlandfunk, August 2013

9.4 Other Professional Activities

Immanuel M. Bomze	• Deputy Director of studies Ph.D. program • Management Committee TD COST 127
Andreas Futschik	• Head of Department (until December)
Walter J. Gutjahr	• Member of Program Committee, EMO 2013, Sheffield, UK • Member of Program Committee, EvoCOP 2013, Vienna, Austria • Member of Program Committee, GECCO 2013, Amsterdam, The Netherlands • Member of Program Committee, MIC 2013, Singapore
Nikolaus Hautsch	• Fellow at the Center of Excellence „Sustainable Architecture for Finance in Europe“ (SAFE), Frankfurt, Germany, since 2013 • Member of the Program Committee of the Annual Conference of the Society for Financial Econometrics (SoFiE), Singapore Management University, June 2013
Irene Klein	• Deputy Head of Department • Member of Curriculum Working Group for Bachelor Studies
Raimund M. Kovacevic	• Member of Executive Board, ÖGOR
Hannes Leeb	• Bernoulli Society, European Regional Committee • Examiner for the Ph.D. Thesis of François Bachoc at University of Paris, Diderot, France • Reviewer for the Ph.D. Thesis of Dilshani Tissera at La Trobe University, Australia
Ivana Ljubic	• Co-Organizer (together with Markus Leitner) of the Workshop „Optimization Tools for Next Generation Telecommunication Networks“ at the Austrian Academy of Sciences, Vienna, Austria • Member of Council of the INFORMS Technical Section on Telecommunications (2010-2014) • Member of Program Committee, INOC 2013, Tenerife, Spain • Member of Program Committee, MIC 2013, Singapore
Georg Pflug	• Member of Central Research Committee, University of Bozen, Italy
Benedikt M. Pötscher	• Deputy Director of Studies Programme Business, Economics and Statistics • External Member of Promotion Committee, University of Cyprus • External Member of Recruitment Committee for Full Professor Position in Econometrics, University of Graz, Austria • Faculty Member of Vienna Graduate School of Economics • Member of Bernoulli-EMS Committee to select speaker for Bernoulli Society-European Mathematical Society Cooperation Lecture at 29th European Meeting of Statisticians, Budapest, Hungary • Member of Program Committee, EMS 2013 (29th European Meeting of Statisticians), Budapest, Hungary