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

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ANNUAL REPORT 2010

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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 2010. 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 2009/10 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 2010, our department has been strengthened by the arrival of Jürgen Berlakovich and Rolf Karner as systems administrators, Johanna Bertl, Stefan Gollowitzer, David Hirschmann, Ulrike Kalliauer, and Anna Timonina as assistants.

Regrettably, there were also several departures. Florian Frommlet, Andrea Gaunersdorfer, Ronald Hochreiter, Ulrike Kalliauer, Ivana Ljubic, Sharif Purhassan, Stefan Rath, Peter Reiter, Felix Ruhaltinger, and Alessandro Tomazic left the department to pursue new professional opportunities. We wish them well in their new posts.

I would like to express special thanks to Vera Lehmwald for editing the Annual Report 2010.

Benedikt Pötscher (HoD)

Vienna, June 2011

2 Faculty and Staff

2.1 Regular Faculty

Immanuel M. Bomze (Prof.)	Operations Research and Quantitative Decision Support, Game Theory and Modelling of Behaviour, Optimization Theory and Application, Asymptotic Statistics, Stochastic Modelling, Dynamical Systems
Florian Frommlet (Dr.)	Applied Mathematics and Statistics
Andreas Futschik (Assoc. Prof.)	Asymptotic Statistics, Applied Statistics, Bioinformatics
Florian Gach (Mag.)	Mathematical Statistics
Andrea Gaunersdorfer (Assoc. Prof.)	Nonlinear Economic Dynamics, Dynamic Interaction in Markets
Stefan Gollowitzer (Dipl.-Ing.)	Combinatorial Optimization, (Mixed) Integer Programming, Network Design
Walter J. Gutjahr (Assoc. Prof.)	Operations Research, Evolutionary Computation, Software Engineering
Nina Huber (Mag.)	Mathematical Statistics, Predictive Inference, Shrinkage Estimation in High Dimensions, Nonparametric Regression
Ulrike Kalliauer (Dipl.-Ing.)	Stochastic Optimization, Stochastic Games
Irene Klein (Assoc. Prof.)	Stochastic Finance
Hannes Leeb (Prof.)	Model Selection, Regularization, and Shrinkage, Statistical Analysis of High-Dimensional Data, Spectral Analysis of Large Random Matrices
Richard Nickl (Dr.) (on leave)	Probability and Statistics in Infinite Dimensions
Georg C. Pflug (Prof.)	Mathematical Statistics, Stochastic Optimization, Risk Management
Alois Pichler (Dr.)	Stochastic Optimization, Risk Management
Benedikt M. Pötscher (Prof.)	Econometrics, Statistics, Time Series Analysis
Erhard Reschenhofer (Assoc. Prof.)	Time Series Analysis, Financial Econometrics, Automatic Model Selection, Chronobiology
Werner Schachinger (Assoc. Prof.)	Optimization, Probabilistic Analysis of Algorithms
Ulrike Schneider (PhD)	Statistics and Combinatorial Optimization

2.2 Externally Funded Faculty

Johanna Bertl	Biostatistics, Approximate Inference
David Hirschmann (Mag.)	Energy Markets, Numerical Methods of Optimal Control, Dynamical Games, Jump Diffusion Processes
Raimund Kovacevic (Dr.)	Stochastic Optimization, Quantitative Risk Management, Stochastic Processes in Finance and Insurance
Ivana Ljubic (Dr.)	Algorithmic Operations Research, Algorithm Engineering
Peter Putz (Dipl.-Ing.)	Combinatorial Optimization, Network Design
Stefan Rath (Mag.)	Operations Research
Peter Reiter (Dr.)	Operations Research (Algorithms for Deterministic and Stochastic Combinatorial Optimization Problems)
Felix Ruhaltinger (Dipl.-Ing.)	Bioinformatics, Applied Statistics
Philipp Thoma (Dipl.-Ing.)	Stochastic Processes and Optimization, Stochastic Finance
Alessandro Tomazic (Dipl.-Math.)	Combinatorial Optimization (Graph Algorithms)

2.3 External Lecturers (Academic Year 2009/10)

Andreas Baierl (Dr.), Peter Bauer (Prof., Medical University Vienna), Johann Brandstetter (Dr.), Stela-Liana Brannath (Mag.), Werner Brannath (Assoc. Prof., Medical University Vienna), Manfred Deistler (Prof., University of Technology Vienna), Evelina Erlacher (Dr.), Stefan Gollowitzer (Dipl.-Ing.), Wilfried Grossmann (Prof., Dept. of Scientific Computing, University of Vienna), Georg Heinze (Assoc. Prof., Medical University Vienna), Ronald Hochreiter (Dr.), Dirk Holste (Dr.), Marcus Hudec (Assoc. Prof., Dept. of Scientific Computing, University of Vienna), Raimund Kovacevic (Dr.), Christoph Krall (Dr.), Ivana Ljubic (Dr.), Karl Moder (Assoc. Prof., University of Natural Resources and Applied Life Sciences, Vienna), Herbert Nagel (Dr.), Martin Posch (Assoc. Prof., Medical University Vienna), Stefan Rath (Mag.), Peter Reiter (Dr.), Harald Schwab (Dr.), Gabriel Strasser (Mag.), Philipp Thoma (Dipl.-Ing.), Alessandro Tomazic (Dipl.-Math.), Reinhard Ullrich (Mag.), Claus Vogl (Dr., University of Veterinary Medicine Vienna), Bertram Wassermann (Mag.), David Wozabal (Dr.), Nancy Wozabal (Dr.), Sonja Zehetmayer (Dr.)

2.4 Teaching Assistants (Academic Year 2009/10)

Karl Ewald, Dana Mináriková, Lukas Steinberger

2.5 Tutors (Academic Year 2009/10)

Buket Aydemir, Reinhard Bazant, Aysegül Engin, Julia Gruber, Lukas Marksteiner, Michael Gregor Miess, Oana Carmen Cojoaca Predescu, David Preinerstorfer, Peter Reschenhofer, Elvira Sinkovits, Robin Tötschel

2.6 Administrative Assistants

Birgit Ewald, Simone Hackl, Gerald Kamhuber, Vera Lehmwald, Manuela Nicham-Zorn

2.7 Systems Administrators

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

3 Visitors

Paula Amaral (The New University of Lisbon, Portugal), Miguel F. Anjos (University of Waterloo, Canada), Adam Bobrowski (TU Lublin, Poland), Simon Boitard (INRA Toulouse, France), Tianxi Cai (Harvard School of Public Health, Boston, USA), Lee Dicker (Harvard School of Public Health, Boston, USA), Julia Dony (Université Libre de Bruxelles, Belgium), Gabriele Eichfelder (University of Erlangen-Nuremberg, Germany), Maria Gantner (Tilburg University, The Netherlands), Bernard Gendron (University of Montreal, Canada), Juan José Salazar Gonzales (University of La Laguna, Spain), Bernd Heidergott (Free University of Amsterdam, The Netherlands), Paul Kabaila (La Trobe University, Melbourne, Australia), Rainer Kolisch (TU Munich, Germany), Mikhail Langovoy (TU Eindhoven, The Netherlands), Iwona Malinowska (TU Lublin, Poland), Małgorzata Murat (TU Lublin, Poland), Michael L. Overton (New York University, USA), David Ramsey (University of Limerick, Ireland), Ludger Rüschendorf (University of Freiburg, Germany), Roman Słowiński (Poznań University of Technology, Poland), Roger J-B Wets (University of California, Davis, USA)

4 Teaching

4.1 Courses Taught (Academic Year 2009/10)

Winter Term 2009/10

Lecturer	Course Title
Andreas Baierl/Marcus Hudec	UK Programming in Statistics
Andreas Baierl/Sonja Zehetmayer	UK Biostatistics
Immanuel Bomze	SE ISDS-Colloquium VO Linear Algebra UK Applied Optimization
Immanuel Bomze/Ivana Ljubic/Werner Schachinger	UK Advanced Optimization
Johann Brandstetter	UK Introduction to Business Mathematics VK Introduction to Business Mathematics FK WMS: Business Mathematics 2
Stela-Liana Brannath	VK Introduction to Business Mathematics (2 sections) FK WMS: Business Mathematics 1
Werner Brannath	VO Linear Models
Evelina Erlacher	UE Linear Algebra
Florian Frommlet	UE Exercises in Markov Processes VO Exercises in Probability
Andreas Futschik	SE Statistical Inference in Biostatistics and Genetics UK Case Studies in Statistics UK Biometrics 2
Andreas Futschik/Erhard Reschenhofer	PR Practical Course
Andreas Futschik/Elisabeth Pernicka	VO Advanced Biostatistics
Andreas Futschik/Reinhard Bürger/ Nicholas Barton/Joachim Hermisson/Christian Schlötterer	SE Seminar (Mathematical population genetics)
Florian Gach	UE Exercises in Probability UE Linear Models (2 sections)
Andrea Gaunersdorfer	EK Quantitative Methods for Business Decisions
Walter Gutjahr	UK Decision Support
Walter Gutjahr/Peter Reiter	EK KFK OR: Operations Research I
Walter Gutjahr/Stefan Rath	EK KFK CTR/OR/ORGA/PÖ: Game Theory
Ronald Hochreiter	UK Applied Statistics
Dirk Holste/Claus Vogl	UK Statistical Genetics and Bioinformatics

Lecturer	Course Title
Nina Huber	UE Linear Algebra
Marcus Hudec	UK Complex Statistical Methods
Irene Klein	VO Markov Processes UK Financial and Insurance Mathematics
Raimund Kovacevic/Alois Pichler	UK Mathematical Statistics
Christoph Krall	FK WMS: Business Statistics 1 (3 sections)
Hannes Leeb	UK Probability Theory 1
Ivana Ljubic	FK WMS: Business Mathematics 2
Herbert Nagel	FK WMS: Business Statistics 1 FK WMS: Business Statistics 2 (2 sections)
Georg Pflug	UK Introduction to Financial Mathematics VO Advanced Stochastic Processes and Models
Georg Pflug/Raimund Kovacevic	UK Basic Principles of Statistics
Peter Putz	VK Introduction to Business Mathematics (2 sections)
Stefan Rath	FK WMS: Business Mathematics 1
Erhard Reschenhofer	UK Time Series Analysis
Werner Schachinger	VO Advanced Analysis UE Advanced Analysis
Harald Schwab	VK Introduction to Business Mathematics FK WMS: Business Mathematics 1 (2 sections)
Gabriel Strasser	VK Introduction to Business Mathematics (2 sections)
Alessandro Tomazic	FK WMS: Business Mathematics 2 UE Linear Algebra
Reinhard Ullrich	FK WMS: Business Mathematics 2 UE Linear Algebra
Bertram Wassermann	FK WMS: Business Statistics 2
David Wozabal	UE Exercises in Probability (2 sections)
Nancy Wozabal	UE Exercises in Probability UK Selected Topics in Statistics

Summer Term 2010

Andreas Baierl/Marcus Hudec	UK Computational Statistics
Immanuel Bomze	SE ISDS-Colloquium VO Analysis
Immanuel Bomze/Werner Schachinger	UK AW-DRS: Advanced Optimization UK Deterministic dynamic models in economics

Lecturer	Course Title
Johann Brandstetter	UK Introduction to Business Mathematics VK Introduction to Business Mathematics FK WMS: Business Mathematics 2
Stela-Liana Brannath	UE Exercises in Analysis (2 sections)
Evelina Erlacher	UE Exercises in Analysis
Florian Frommlet	UK Linear Multivariate Statistics UK Biometrics 1
Andreas Futschik	VO Introduction to Statistical Inference PR Statistical Genetics and Bioinformatics
Andreas Futschik/Andreas Baierl	VO Introduction to Biostatistics
Andreas Futschik/Martin Posch/Werner Brannath/Peter Bauer	SE Research Privatissimum in Biostatistics and Genetics
Andreas Futschik/Reinhard Bürger/Joachim Hermisson/Christian Schlötterer	SE Seminar (Mathematical population genetics)
Florian Gach	UE Exercises in Statistical Inference
Andrea Gaunersdorfer	EK Quantitative Methods for Business Decisions
Stefan Gollowitzer	VK Introduction to Business Mathematics FK WMS: Business Mathematics 2 (2 sections)
Wilfried Grossmann	FK nBWM INF: Applied Multivariate Statistics for Business Students
Wilfried Grossmann/Marcus Hudec	UK Generalized Linear Model
Walter Gutjahr	UK Classification, Clustering and Discrimination SE KFK OR: Computational Operations Research VU Game Theory
Walter Gutjahr/Stefan Rath	UK Methods of Decision Support
Walter Gutjahr/Peter Reiter	VK nBWM: OR Methods in Production and Logistics 1
Georg Heinze/Karl Moder/Martin Posch/Sonja Zehetmayer	PR Statistical Consulting
Nina Huber	UE Exercises in Statistical Inference
Irene Klein	UK Stochastic Processes UE Exercises in Statistical Inference (2 sections)
Raimund Kovacevic	SE Seminar in Statistics for Master Studies
Raimund Kovacevic/David Wozabal	UK Nonparametric Inference and Resampling
Christoph Krall	FK WMS: Business Statistics 1 (3 sections)
Hannes Leeb	UK Probability Theory 2
Ivana Ljubic	UK Graph Algorithms and Network Flows

Lecturer	Course Title
Peter Reiter/Ivana Ljubic	UK KFK OR: Operations Research II
Herbert Nagel	FK WMS: Business Statistics 1 FK WMS: Business Statistics 2 (2 sections)
Georg Pflug	VO Advanced Stochastic Processes: Modeling and Approximation UK Introduction to Insurance Mathematics SE PhS: Research Privatissimum
Alois Pichler	UE Exercises in Analysis
Benedikt Pötscher	UK Introduction to Econometrics UK Econometrics
Benedikt Pötscher/Manfred Deistler/Hannes Leeb	SE Research Privatissimum in Econometrics/Statistics
Peter Putz	VK Introduction to Business Mathematics (2 sections)
Stefan Rath	VK Introduction to Business Mathematics
Erhard Reschenhofer	UK Multivariate Time Series Analysis FK nBWM IA, FE: Financial Econometrics
Erhard Reschenhofer/Alois Pichler	SE Seminar in Statistics
Werner Schachinger	UK Stochastic Models
Harald Schwab	FK WMS: Business Mathematics 1 (3 sections)
Gabriel Strasser	FK WMS: Business Mathematics 1
Philipp Thoma	UE Exercises in Statistical Inference
Alessandro Tomazic	FK WMS: Business Statistics 1 FK WMS: Business Mathematics 2
Gabriele Uchida	PR KFK OR: Software Applications in Operations Research
Reinhard Ullrich	FK WMS: Business Mathematics 1 UE Exercises in Analysis
Bertram Wassermann	FK WMS: Business Statistics 2

4.2 Theses Supervised

4.2.1 PhD Theses

Supervisor	Author	Title
Andreas Futschik*	Georg Gutjahr	Adaptive designs with nuisance parameters
Walter J. Gutjahr	Peter Reiter	Matheuristic algorithms for solving multi-objective/stochastic scheduling and routing problems
Walter J. Gutjahr*	Pamela Nolz	Solution techniques for disaster operations with real world constraints and multiple objectives
Walter J. Gutjahr*	Prasanna Balaprakash (Université Libre de Bruxelles, Belgium)	Estimation-based metaheuristics for stochastic combinatorial optimization
Benedikt Pötscher	Florian Gach	Efficiency in indirect inference

4.2.2 Master Theses

Supervisor	Author	Title
Immanuel Bomze	Reinhard Ullrich	Evolutionary game theory – the infection-immunisation dynamics and its microfoundation
Andreas Futschik	Johanna Bertl	Kreuzvalidierung angewandt auf Approximate Bayesian Computation
Andreas Futschik	Melanie Görner	Tumor classification based on gene expression profiles
Andreas Futschik	Raimund Möser	Gemischte Modelle in der Biostatistik
Andrea Gaunersdorfer	Marcus Hofer	Hedge funds in the subprime credit crisis
Walter J. Gutjahr	Reinhard Bazant	Laufzeitanalyse von Iterated Local Search und Simulated Annealing am Traveling Salesman Problem
Walter J. Gutjahr	Richard Simek	Prognose der Anzahl von Pareto-optimalen Lösungen für ein bikriterielles Facility Location Problem
Irene Klein	Stefan Dangubic	Aggregation of market and credit risk
Erhard Reschenhofer	Christian Holzmann	Forecasting stock market returns using recursive market timing strategies

* second supervisor

Erhard Reschenhofer	Georg V. Lehecka	Forecasting and trading of seasonal commodity futures spreads

4.3 Bachelor Theses

Walter J. Gutjahr (11), Ivana Ljubic (1), Alois Pichler (2), Erhard Reschenhofer (8)

5 Publications

5.1 Monographs

Bomze, **Immanuel M**., Demyanov, Vladimir, Fletcher, Roger, Terlaky, Tamás: Nonlinear Optimization: Lectures Given At The C. I. M. E. Summer School Held In Cetraro, Italy, July 1-7, 2007 (Di Pillo, Gianni, Schoen, Fabio (Eds.)). Lecture Notes in Mathematics **1989**. Springer, Berlin and Heidelberg, 2010.

5.2 Journal Articles

Addis, Bernardetta, **Schachinger**, **Werner**: Morse potential energy minimization: Improved bounds for optimal configurations. *Computational Optimization and Applications* **47**, 129-131, 2010.

Arhant, Christine, Bubna-Littitz, Hermann, Bartels, Angela, **Futschik**, **Andreas**, Troxler, Josef: Behaviour of smaller and larger dogs: Effects of training methods, inconsistency of owner behaviour and level of engagement in activities with the dog. *Applied Animal Behaviour Science* **123**, 131-142, 2010.

Bomze, **Immanuel M**., **Schachinger**, **Werner**: Multi-Standard Quadratic optimization problems: interior point methods and cone programming reformulation. *Computational Optimization and Applications* **45**, 237-256, 2010.

Bomze, **Immanuel**, **Frommlet**, **Florian**, Locatelli, Marco: Copositivity cuts for improving SDP bounds on the clique number. *Mathematical Programming* **124**, 13-32, 2010.

Bomze, **Immanuel**, **Frommlet**, **Florian**, Locatelli, Marco: Gap, cosum, and product properties of the θ' bound on the clique number. *Optimization* **59**, 1041-1051, 2010.

Bomze, **Immanuel**, Jarre, Florian: A note on Burer's copositive representation of mixed-binary QPs. *Optimization Letters* **4**, 465-472, 2010.

Bomze, **Immanuel**, Lemaréchal, Claude: Necessary conditions for local optimality in difference-of-convex programming. *Journal of Convex Analysis* **17**, 673-680, 2010.

Chen, Si, **Ljubic**, **Ivana**, Raghavan, S.: The regenerator location problem. *Networks* **55**, 205-220, 2010.

Chimani, Markus, Kandyba, Maria, **Ljubic**, **Ivana**, Mutzel, Petra: Orientation-based Models for {0,1,2}-Survivable Network Design: Theory and Practice. *Mathematical Programming* **124**, 413-440, 2010.

Dockner, Engelbert J., **Gaunersdorfer**, **Andrea**: Dynamic investment strategies with demand-side and cost side risks. *Applied Mathematics and Computation* **217**, 1001-1009, 2010.

Farenhorst-Yuan, Taoying, Heidergott, Bernd, **Pflug**, **Georg C**., Vasquez, Felisa: Gradient estimation by measure valued differentiation. *ACM Transactions on Modeling and Computer Simulation* **20**, 502-526, 2010.

Frommlet, **Florian**: Some Properties of a Recently Introduced Approach to Ordinal Regression. *Austrian Journal of Statistics* **39**, 182-202, 2010.

Frommlet, **Florian**: Tag SNP selection based on clustering according to dominant sets found using replicator dynamics. *Advances in Data Analysis and Classification* **4**, 65-83, 2010.

Futschik, **Andreas**, Schlötterer, Christian: The next generation of molecular markers from massively parallel sequencing of pooled DNA samples. *Genetics* **186**, 207-218, 2010.

Gollowitzer, **Stefan**, **Ljubic**, **Ivana**: MIP models for connected facility location: A theoretical and computational study. *Computers & Operations Research* (available online since 3rd August 2010)

Gutjahr, **Walter J**., Katzensteiner, Stefan, **Reiter**, **Peter**, Stummer, Christian, Denk, Michaela: Multi-objective decision analysis for competence-oriented project portfolio selection. *European Journal of Operational Research* **205**, 670-679, 2010.

Gutjahr, **Walter J**., **Reiter**, **Peter**: Bi-objective project portfolio selection and staff assignment under uncertainty. *Optimization* **59**, 417-445, 2010.

Isogai, Eiichi, **Futschik**, **Andreas**: Sequential estimation of a linear function of location parameters of two negative exponential distributions. *Journal of Statistical Planning and Inference* **140**, 2416-2424, 2010.

Kabaila, Paul, Giri, Khageswor, **Leeb, Hannes**: Admissibility of the usual confidence interval in linear regression. *Electronic Journal of Statistics* **4**, 300-312, 2010.

Kovacevic, **Raimund**, **Pflug**, **Georg C**.: Does insurance help to escape the poverty trap? – A ruin theoretic approach. *The Journal of Risk and Insurance* (available online since 29th November 2010)

Ljubic, **Ivana**: A Branch-and-Cut-and-Price Algorithm for Vertex Biconnectivity Augmentation. *Networks* **56**, 169-182, 2010.

Pflug, **Georg C**., Schaller, Peter: A note on pivotal Value-at-Risk estimates. *Statistics and Decisions* **27**, 201-209, 2010.

Pflug, **Georg C**., **Wozabal**, **Nancy**: On the asymptotic distribution of coherent risk functionals. *Finance and Stochastics* **14**, 397-418, 2010.

Pflug, **Georg C**.: Version-independence and nested distributions in multistage stochastic optimization. *SIAM Journal on Optimization* **20**, 1406-1420, 2010.

Ploberger, Werner, **Reschenhofer**, **Erhard**: Testing for cycles in multiple time series. *Journal of Time Series Analysis* **31**, 427-434, 2010.

Pötscher, **Benedikt M**., **Nickl**, **Richard**: Efficient Simulation-Based Minimum Distance Estimation and Indirect Inference. *Mathematical Methods of Statistics* **19**, 327-364, 2010.

Pötscher, **Benedikt M**., **Schneider**, **Ulrike**: Confidence Sets Based on Penalized Maximum Likelihood Estimators. *Electronic Journal of Statistics* **10**, 334-360, 2010.

Rauner, Marion, **Gutjahr**, **Walter J**., Heidenberger, Kurt, Wagner, Joachim, Pasia, Joseph: Dynamic policy modeling for chronic diseases: metaheuristic-based identification of pareto-optimal screening strategies. *Operations Research* **58**, 1269-1286, 2010.

Reschenhofer, **Erhard**, Cerman, Markus, Gulyas, Andreas, Mauerhofer, Jonathan, Stefan, Leopold: Can price-earnings ratios really forecast stock returns? Evidence from historical U.S. data 1871-2009. *Global Journal of Finance and Management* **2**, 307-320, 2010.

Reschenhofer, **Erhard**, Holzmann, Christian: How do apparently successful trading strategies really work? *The Open Business Journal* **3**, 57-63, 2010.

Reschenhofer, **Erhard**: Discriminating between nonnested models. *Far East Journal of Theoretical Statistics* **31**, 117-133, 2010.

Reschenhofer, **Erhard**: Forecasting volatility: double averaging and weighted medians. *International Journal of Computational Economics and Econometrics* **1**, 317-326, 2010.

Reschenhofer, **Erhard**: Further evidence on the turn-of-the-month effect. *Business and Economics Journal* **16**, 2010.

Yao, Xiao-Guang, **Frommlet**, **Florian**, Zhou, Ling, Zu, Feiya, Wang, Hong-Mei, Yan, Zhi-Tao, Luo, Wen-Li, Hong, Jing, Wang, Xin-Ling, Li, Nan-Fang: The prevalence of hypertension, obesity and dyslipidemia in individuals of over 30 years of age belonging to minorities from the pasture area of Xinjiang. *BMC Public Health* **24**, 1-7, 2010.

You, Alexandre, **Schneider, Ulrike**, Guillou, Armelle, Naveau, Philippe: Improving Extreme Quantile Estimation Via a Folding Procedure. *Journal of Statistical Planning and Inference* **140**, 1775-1787, 2010.

5.3 Contributions to Proceedings and Edited Books

Bomze, **Immanuel**, Chimani, Markus, Jünger, Michael, **Ljubic**, **Ivana**, Mutzel, Petra, Zey, B.: Solving Two-Stage Stochastic Steiner Tree Problems by Two-Stage Branch-and-Cut. In: *Proceedings of International Society for Augmentative & Alternative Communication (ISAAC) 2010*. *Lecture Notes in Computer Science* **6506**, 427-439, 2010.

De Maio, Nicola, Kosiol, Carolin, Kofler, Robert, Kapun, Martin, Orozco ter Wengel, Pablo, Nolte, Viola, **Futschik**, **Andreas**, Schlötterer, Christian: Estimation of population genetic parameters from pooled sequencing data of Drosophila species. In: *Proceedings of Statistical Challenges Arising from Genome Resequencing*, *July 13-16, 2010*. Isaac Newton Institute for Mathematical Sciences, Cambridge, UK, 2010.

Gutjahr, **Walter J**.: Stochastic search in metaheuristics. In: Gendreau, M., Potvin, Y. (Eds.): *Handbook of Metaheuristics*. *Springer International Series in Operations Research and Management Science* **146**, 573-597, 2010.

Ljubic, **Ivana**, **Gollowitzer**, **Stefan**: Modelling the Hop Constrained Connected Facility Location Problem on Layered Graphs. In: *Proceedings of the International Symposium on Combinatorial Optimization (ISCO)*. *Electronic Notes in Discrete Mathematics* **36**, 207-214, 2010.

Nolz, Pamela, Doerner, Karl F., **Gutjahr**, **Walter J**., Hartl, Richard F.: A bi-objective metaheuristic for disaster relief operation planning. In: *Advances in Multi-Objective Nature Inspired Computing*. *Springer Studies in Computational Intelligence* **272**, 167-187, 2010.

Rota Bulò, Samuel, Pelillo, Marcello, **Bomze**, **Immanuel**: Fast population game dynamics for dominant sets and other quadratic optimization problems. In: Hancock, E. R., Wilson, R. C., Windeatt, T., Ulusoy, I., Escolano, F. (Eds.): *Structural, Syntactic, and Statistical Pattern Recognition*, *SS&SPR 2010*. *Lecture Notes in Computer Science* **6218**. Springer, Heidelberg, 275-285, 2010.

Szabo, Simone, Barth, Kerstin, Graml, Christine, **Futschik**, **Andreas**, Palme, Rupert, Waiblinger, Susanne: Grouping after parturition in presence of kids reduces stress in young dairy goats. In: *Proceedings of the 44th Congress of the International Society for Applied Ethology (ISAE)*, *August 4-7, 2010. Uppsala, Sweden*, 2010.

Vogl, Claus, **Futschik**, **Andreas**: Hidden Markov models in biology. In: Carugo, O. (Ed.): *Data mining techniques for the life sciences. Methods in molecular biology* **609**. Humana Press, New York, 241-253, 2010.

5.4 Technical Reports and Working Papers

Amaral, Paula, **Bomze**, **Immanuel**, Júdice, Joaquim: Copositivity and constrained fractional quadratic problems. *TR 2010-05*.

Bogdan, Małgorzata, Chakrabarti, Arijit, **Frommlet**, **Florian**, Ghosh, Jayantha K.: Asymptotic Bayes-Optimality under sparsity of some multiple testing procedures. *Annals of Statistics* (accepted)

Froeschl, Karl A., Denk, Michaela, **Gutjahr**, **Walter J**., Riedmann, Harald, Stummer, Christian: Training on the project: a quantifying approach to competence development.

Frommlet, **Florian**, Bogdan, Małgorzata, Chakrabarti, Arijit: Asymptotic Bayes optimality under sparsity of selection rules for general priors. *TR 2010-07.*

Futschik, **Andreas**, Ramsey, David M.: Optimal Pooling for the Detection of Single Nucleotide Polymorphism Using New Generation Genome Sequencers.

Guntuboyina, Aditianand, **Leeb, Hannes**: Shrinkage estimation of a univariate normal mean.

Gutjahr, **Walter J**., Froeschl, Karl A.: Project portfolio selection under uncertainty with outsourcing opportunities.

Gutjahr, **Walter J**.: Runtime analysis of an evolutionary algorithm for stochastic multi-objective combinatorial optimization.

Hemmelmayr, Vera C., Doerner, Karl F., Hartl, Richard F., **Rath**, **Stefan**: A Heuristic Solution Method for Node Routing Based Solid Waste Collection Problems (submitted)

Kofler, Robert, Orozco ter Wengel, Pablo, De Maio, Nicola, Pandey, Ram Vinay, Nolte, Viola, **Futschik**, **Andreas**, Kosiol, Carolin, Schlötterer, Christian: PoPoolation: A Toolbox for Population Genetic Analysis of Next Generation Sequencing Data from Pooled Individuals. To appear in: *PLoS ONE*.

Kovacevic, **Raimund M**., **Pflug**, **Georg C**.: Does Insurance Help to Escape the Poverty Trap? – A Ruin Theoretic Approach. *Journal of Risk and Insurance* **78** (accepted)

Kovacevic, **Raimund**: Acceptability Mappings as Banach lattice valued mappings. *Statistics and Decisions* (submitted)

Kovacevic, **Raimund**: Maximum-Loss, Minimum-Win and the Esscher pricing principle. *IMA Journal of Management Mathematics* (submitted)

Leeb, Hannes: On the distribution of low-dimensional projections from high-dimensional models.

Lin, Kao, Li, Haipeng, Schlötterer, Christian, **Futschik**, **Andreas**: Distinguishing Positive Selection from Neutral Evolution with the Boosting Algorithm. To appear in: *Genetics*.

Ljubic, **Ivana**, **Gollowitzer**, **Stefan**: Layered Graph Approaches to the Hop Constrained Connected Facility Location Problem. *TR 2010-08*.

Pflug, **Georg C**., **Kovacevic**, **Raimund**: Are time consistent risk functionals (resp. acceptability functional) information monotone? *Finance and Stochastics* (submitted)

Pflug, **Georg C**., **Pichler**, **Alois**: Approximations for Probability Distributions and Stochastic Optimization Problems. To appear in: Consigli, G., Dempster, M., Bertocchi, M. (Eds.): *Springer Handbook on Stochastic Optimization Methods in Finance and Energy*.

Pötscher, **Benedikt M**., **Gach**, **Florian**: Nonparametric Maximum Likelihood Density Estimation and Simulation-Based Minimum Distance Estimators.

Rath, **Stefan**, **Gutjahr**, **Walter J**.: A math-heuristic for the warehouse location routing problem in disaster relief (submitted)

Reiter, **Peter**, **Gutjahr**, **Walter J**.: Exact hybrid algorithms for solving a bi-objective vehicle routing problem.

Reschenhofer, **Erhard**, Ploberger, Werner, Lehecka, Georg V.: Detecting fuzzy periodic patterns in futures spreads.

Reschenhofer, **Erhard**, Schilde, Michael, Oberecker, Eva, Payr, Ellen, Tandogan, Hasan T., Wakolbinger, Lea M.: Identifying the determinants of foreign direct investment: a data-specific model selection approach. To appear in: *Statistical Papers*, 2011.

Schneider, Ulrike: A Tabu Search Tutorial Based on a Real-World Scheduling Problem. *Central European Journal of Operations Research* (accepted)

Steinberger, **Lukas**, Preinerstorfer, David, **Reschenhofer**, **Erhard**: Averaging across Estimation Windows: Asymptotic Results and Empirical Evidence.

6 Presentations

6.1 Conference Presentations

	Conference	Title of Presentation
Johanna Bertl	15th Young Statisticians Meeting, Vorau, Austria	Can Cross-Validation help to tune an ABC algorithm?
Immanuel M. Bomze	1st Alpen-Adria Workshop on Optimization, University of Klagenfurt, Austria	Dimensional reduction, maximum variance unfolding, and complete positivity
Immanuel M. Bomze	Workshop “Nonlinear Optimization, Variational Inequalities and Equilibrium Problems”, Erice, Italy	Certificates for copositive programming
Immanuel M. Bomze	8th EUROPT Workshop “Advances in Continuous Optimization”, Aveiro, Portugal (invited, keynote speaker)	A nasty cone with nice properties – new issues in copositive optimization
Immanuel M. Bomze	EURO XXIV (24th European Conference on Operational Research) 2010, Lisbon, Portugal	Certificates for copositive programming
Immanuel M. Bomze	Symposium GfKl 2010, Karlsruhe, Germany (invited, plenary speaker)	Interplay of game theory, dynamics and optimization for fast similarity-based clustering via dominant sets
Immanuel M. Bomze	COMPSTAT (19th International Conference on Computational Statistics) 2010, Paris, France	Shooting arrows at the stock market
Immanuel M. Bomze	AIRO (41st Annual Conference “Operations Research for Complex Decision Making“) 2010, Altafiumara, Italy	Copositivity detection by dcd and omega-subdivision
Florian Frommlet	COMPSTAT (19th International Conference on Computational Statistics) 2010, Paris, France	Modifications of BIC: Asymptotic optimality properties under sparsity and applications in genome wide association studies
Florian Frommlet	SuSTaIn Workshop: Sparse structures: statistical theory and practice, Bristol, UK	Bayes oracle and asymptotic optimality of multiple testing procedures under sparsity
Florian Frommlet	Wittgenstein Recess, Goesing, Austria	Multiple testing vs. model selection in applications of molecular biology

	Conference	Title of Presentation
Andreas Futschik	Dagstat 2010, Dortmund, Germany	Massively parallel sequencing of pooled DNA samples – the next generation of molecular markers
Stefan Gollowitzer	Workshop on Combinatorial Optimization, Aussois, France	Hop constrained connected facility location
Stefan Gollowitzer	International Symposium on Combinatorial Optimization, Hammamet, Tunisia	Modelling the hop constrained connected facility location problem on layered graphs
Stefan Gollowitzer	10th INFORMS Telecommunications Conference, Montreal, Canada	Hop constrained connected facility location
Stefan Gollowitzer	Matheuristics 2010, Vienna, Austria	Using population-based algorithms for column generation
Stefan Gollowitzer	EURO XXIV (24th European Conference on Operational Research) 2010, Lisbon, Portugal	Hop constrained connected facility location
Walter J. Gutjahr	Dagstuhl Seminar on Theory of Evolutionary Algorithms, Schloss Dagstuhl, Germany	Runtime analysis of an EA for stochastic multi-objective combinatorial optimization
Raimund M. Kovacevic	EURO XXIV (24th European Conference on Operational Research) 2010, Lisbon, Portugal	Multi-period acceptability functionals: the role of information monotonicity
Raimund M. Kovacevic	Computational Management Science 2010, Vienna, Austria	A semiparametric model for EEX electricity spot price
Raimund M. Kovacevic	IDRiM (1st Annual Conference of the International Society for Integrated Disaster Risk Management) 2010, University of Natural Resources and Applied Life Sciences, Vienna, Austria	Does insurance help to escape the poverty trap? – a ruin theoretic approach
Hannes Leeb	Annual Meeting of the German Statistical Society, Nuremberg, Germany (invited)	Conditional predictive inference post model selection
Hannes Leeb	Workshop on Non-Standard Confidence and Prediction Regions, Melbourne, Australia (invited)	The Stein phenomenon for point estimators and confidence sets
Hannes Leeb	Conference on Resampling Methods and High Dimensional Data, College Station, Texas, USA (invited)	Conditional predictive inference post model selection
Hannes Leeb	Australian Statistical Conference, Fremantle, Australia	Shrinkage estimation of a univariate normal mean
Ivana Ljubic	Optimisation Days, Montreal, Canada	The generalized regenerator location problem

	Conference	Title of Presentation
Ivana Ljubic	10th INFORMS Telecommunications Conference, Montreal, Canada	MIP models for connected facility location: a theoretical and computational study
Ivana Ljubic	Algorithm Engineering Seminar, Schloss Dagstuhl, Germany (invited)	Two-stage branch & cut for two-stage stochastic network design problems
Ivana Ljubic	EURO XXIV (24th European Conference on Operational Research) 2010, Lisbon, Portugal (invited)	The generalized regenerator location problem
Ivana Ljubic	Computational Management Science 2010, Vienna, Austria	Solving two-stage stochastic Steiner tree problems by two-stage branch-and-cut
Alois Pichler	12th International Conference on Stochastic Programming, Halifax, Canada	Continuity properties of acceptability functionals
Georg C. Pflug	MEC-EurOpt2010, Izmir, Turkey (invited)	Risk measures: time consistency and information monotonicity
Georg C. Pflug	EURO XXIV (24th European Conference on Operational Research) 2010, Lisbon, Portugal (invited, stream organizer)	Ambiguity and minimaxity in portfolio selection
Georg C. Pflug	12th International Conference on Stochastic Programming, Halifax, Canada (invited, keynote speaker)	Stochastic optimization and beyond
Georg C. Pflug	XXXIV Convegno A.M.A.S.E.S. 2010, Macerata, Italy (invited, keynote speaker)	From stochastic optimization to stochastic games
Georg C. Pflug	International Conference on Operations Research 2010, Munich, Germany (invited)	Ambiguity in stochastic optimization
Georg C. Pflug	SuSTaIn Workshop Stochastic Approximation, Bristol, USA (invited)	Estimation of gradients
Georg C. Pflug	Veszprém Optimization Conference: Advanced Algorithms (VOCAL) 2010, Veszprém, Hungary (invited)	On stochastic bilevel programs
Benedikt M. Pötscher	9th German Open Conference on Probability and Statistics, Leipzig, Germany (plenary)	Simulation-based minimum distance estimation and indirect inference
Benedikt M. Pötscher	Statistische Woche 2010, Nuremberg, Germany (invited)	Model selection and inference

	Conference	Title of Presentation
Benedikt M. Pötscher	Statistische Woche 2010, Nuremberg, Germany (invited)	Penalized maximum likelihood estimators and some distributional results
Stefan Rath	ALIO-INFORMS Joint International Meeting, Buenos Aires, Argentina	Location of warehouses in disaster relief operations planning
Ulrike Schneider	9th German Open Conference on Probability and Statistics, Leipzig, Germany	Confidence sets based on penalized maximum likelihood estimators
Ulrike Schneider	Statistische Woche 2010, Nuremberg, Germany	Confidence sets based on penalized maximum likelihood estimators

6.2 Outside Seminar Presentations

	Institution	Title
Immanuel M. Bomze	University of Pavia, Italy	A new equilibrium selection procedure
Immanuel M. Bomze	University of Cologne, Germany	A nasty cone with nice properties - new issues in copositive optimization
Immanuel M. Bomze	The New University of Lisbon, APDIO/CMA, Caparica, Portugal	Course on global optimization
Florian Frommlet and Felix Ruhaltinger	Stochastic Seminary, Torun University, Poland	A model selection approach to GWAS
Florian Frommlet	University of Limerick, Ireland	Asymptotic optimality properties of multiple testing and model selection procedures under sparsity
Florian Frommlet	IFAS Johannes Kepler University of Linz, Austria	Bayes oracle and asymptotic optimality of multiple testing procedures under sparsity
Andreas Futschik	University of Linz, Austria	Summary statistic based inference in population genetics
Andreas Futschik	TU Graz, Austria	Multiple comparison procedures when the number of hypotheses is large
Stefan Gollowitzer	TU Berlin, Germany	The connected facility location problem
Walter J. Gutjahr	Centre for Cancer Research and Cell Biology, Queen's University Belfast, UK	Multi-objective optimization of screening strategies for severe diseases
Irene Klein	Faculty of Mathematics, Seminar Financial Mathematics, University of Vienna, Austria	A large financial markets approach to bond markets

	Institution	Title
Hannes Leeb	University of Goettingen, Germany	Shrinkage estimation of a univariate normal mean
Hannes Leeb	La Trobe University, Australia	Conditional predictive inference post model selection
Ivana Ljubic	Combinatorial Optimization & Graph Algorithms (COGA), TU Berlin, Germany	Dissaggregated flow formulation for the single-source network-loading problem
Ivana Ljubic	Combinatorial Optimization & Graph Algorithms (COGA), TU Berlin, Germany	OptTelNets: Algorithmische Ansätze
Georg C. Pflug	FH Dornbirn, Austria	Introduction to stochastic optimization
Georg C. Pflug	University of St. Gallen, Switzerland	Risk measures: time consistency and information monotonicity
Benedikt M. Pötscher	European Centre for Advanced Research in Economics and Statistics (ECARES), Université Libre de Bruxelles, Belgium	Efficient simulation-based minimum-distance estimation and indirect inference
Ulrike Schneider	University of Cambridge, UK	On the distribution of the adaptive lasso estimator
Ulrike Schneider	University of Hamburg, Germany	Statistische Extremwertanalyse von Niederschlagsdaten
Ulrike Schneider	Université Libre de Bruxelles, Belgium	On the distribution of penalized maximum likelihood estimators
Ulrike Schneider	École Polytechnique Fédérale de Lausanne, Switzerland	On the distribution of penalized maximum likelihood estimators

6.3 Departmental Seminars

Gabriele Eichfelder (University of Erlangen-Nuremberg): A new copositivity test (January, 11)

Alessandro Tomazic (University of Vienna): Computing bounds for a new general connected facility location problem (January, 18)

Florian Gach (University of Vienna): Efficiency in indirect inference (January, 25)

Maria Gantner (Tilburg University): The shorth plot (March, 01)

Lee Dicker (Harvard School of Public Health, Boston): Estimating-equation based variable selection with the Dantzig selector and extensions (March, 15)

Mikhail Langovoy (TU Eindhoven): Spatial statistics, image analysis and percolation (March, 22)

Miguel F. Anjos (University of Waterloo): Warm starts for interior-point methods in combinatorial optimization (April, 12)

Bernd Heidergott (Free University of Amsterdam): A Swiss Army Knife formula for Markov processes (May, 03)

Julia Dony (Université Libre de Bruxelles): An empirical process approach to proving uniform in-bandwidth-consistency of general and non-standard kernel estimators (May, 10)

Rainer Kolisch (TU Munich): An efficient hybrid metaheuristic for integrated scheduling and staffing IT-projects based on a generalized minimum cost flow network (May, 17)

Nina Huber and Richard Kiener (University of Vienna): Public presentation of Abraham-Wald-Ph.D. projects (May, 31)

Stefanie Kritzinger and Philipp Thoma (University of Vienna): Public presentation of Abraham-Wald-Ph.D. projects (May, 31)

Paula Amaral (The New University of Lisbon): From infeasibility to copositivity (June, 07)

Roger J-B Wets (University of California, Davis): About sample average approximations to solutions of stochastic variational problems (June, 11)

Michael L. Overton (New York University): Nonsmooth, nonconvex optimization (June, 14)

Tianxi Cai (Harvard School of Public Health, Boston): Robust risk prediction with complex studies (June, 21)

Paul Kabaila (La Trobe University, Melbourne): Admissibility of the usual confidence interval in linear regression (June, 28)

Monika Henzinger (University of Vienna): Sponsored search auctions or how web search engines make money (October, 18)

Ludger Rüschendorf (University of Freiburg): Stochastic dependence, extremal risk and optimal portfolio diversification (October, 22)

Roman Słowiński (Poznań University of Technology): Robust ordinal regression approach to multiple criteria decision aiding (November, 18)

Karl Schlag (University of Vienna): Finite sample nonparametric tests for linear regressions (December, 13)

7 Grants and Projects

Immanuel M. Bomze and Ivana Ljubic (Project-Coordinators) Research Associates: Peter Putz, Alessandro Tomazic	Algorithmic Solutions for Optimal Design of Telecommunication Networks, funded by FFG, 2007-2010
Florian Frommlet (Principal Investigator)	Statistical issues in data mining – optimal rules for high dimensional model selection and multiple testing, funded by OeAD-WTZ, 2009-2010
Florian Frommlet (Principal Investigator)	Optimal selection procedures in genome-wide association studies, funded by WWTF, 2010-2013
Andreas Futschik (Project-Coordinator)	Probabilistic and Statistical Problems in Genetics, funded by OeAD-WTZ Poland, 2010-2011
Walter J. Gutjahr (Sub-Project Coordinator) Research Associate: Peter Reiter	Matheuristics – Hybrid Algorithms for Transportation Problems with Multiple Visits, funded by FWF, 2008-2010
Walter J. Gutjahr (Sub-Project Coordinator) Research Associate: Stefan Rath	Disaster Relief Operations Planning, funded by FWF, 2007-2010
Maarten Janssen (Project-Coordinator) Research Associates: Hannes Leeb, Benedikt Pötscher	Doktoratskolleg Economics, funded by FWF, 2010-2014
Ivana Ljubic	Algorithmic Solutions for Last-Mile Networks – Hertha Firnberg-Nachwuchsstelle, funded by FWF, 2007-2010
Ivana Ljubic (Project-Coordinator) Research Associates: Immanuel Bomze, Peter Putz	Flow-Projection Results in Telecommunication: Models and Algorithms, funded by OeAD, 2010-2011
Georg C. Pflug (Project-Coordinator) Research Associate: Raimund Kovacevic	Multiperiod risks in portfolio selection, funded by FWF, 2008-2011
Georg C. Pflug (Project-Coordinator) Research Associate: Philipp Thoma	Gradient estimation by measure valued differentiation-calculation of “the Greeks”, funded by Austrian National Bank, 2009-2011
Georg C. 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 C. Pflug (Project-Coordinator) Research Associates: David Hirschmann, Raimund Kovacevic	Energy Policies and Risk Management for the 21st Century, funded by WWTF, 2010-2013
Stefan Rath	Solution Methods for Stochastic and Multiobjective Warehouse Location Problems in Disaster Relief, funded by Marietta Blau Grant (BMWF), 2010-2011

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
Immanuel M. Bomze	University of Calabria, Rende, Italy	Two-sphere separation procedures via non-smooth optimization	1
Immanuel M. Bomze	University of Cologne, Germany	Two-stage branch-and-cut procedures for two-stage stochastic Steiner tree problems	1
Immanuel M. Bomze	The New University of Lisbon, Portugal	Conic formulation of fractional quadratic programs	2
Andreas Futschik	PICB, Shanghai, China	Machine learning for population genetics	2
Andreas Futschik	TU Lublin, Poland	Statistics and probability for population genetics	1
Andreas Futschik	Feuerkogel, Ebensee, Austria	DK population genetics	0,5
Stefan Gollowitzer	University of Lisbon, Portugal	Two level network design problems with facility location	3
Stefan Gollowitzer	TU Berlin, Germany	Workshop on optical access networks	1
Walter J. Gutjahr	Queen's University Belfast, UK	Multi-objective optimization in RNA structure prediction and cancer research	2
Irene Klein	ETH Zurich, Switzerland	Large financial markets and bond markets	2
Hannes Leeb	La Trobe University, Australia	Confidence sets centered at shrinkage estimators	1
Ivana Ljubic	Department of Statistics and Operations Research, University of Lisbon, Portugal	Two-Level Network Design Problems	1
Ivana Ljubic	Department of Computer Science, TU Dortmund, Germany	Solving two-stage stochastic Steiner tree problems by two-stage branch-and-cut	1
Ivana Ljubic	Robert H. Smith School of Business, University of Maryland, College Park, MD, USA	The generalized regenerator location problem	1

	Institution	Research Topic	Weeks
Ivana Ljubic	Combinatorial Optimization & Graph Algorithms (COGA), TU Berlin, Germany	Optical access networks	1

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) • Journal of Global Optimization (Member of Editorial Board) • Optimization Letters (Member of Editorial Board) • TOP (Member of Editorial Board)
Andreas Futschik	• International Journal of Information and Management Sciences (Associate Editor)
Walter J. Gutjahr	• Advances in Operations Research (Member of Editorial Board) • Swarm Intelligence (Member of Editorial Board)
Georg C. Pflug	• Statistics and Decisions (Editor-in-Chief) • Computational Optimization and Applications (Associate Editor) • Computational Management Science (Associate Editor) • Central European Journal of OR (Associate Editor) • Austrian Journal of Statistics (Associate Editor) • Energy Systems: Optimization, Modeling, Simulation and Economic Aspects (Associate Editor)
Ronald Hochreiter, Georg C. Pflug	• Annals of Operations Research – Applied Mathematical Programming and Modelling (APMOD 2008) (special issue)
Benedikt M. Pötscher	• Econometric Theory (Co-Editor) • Journal of Econometrics (Associate Editor)

9.2 Refereeing[1]

Immanuel M. Bomze	• Optimization Methods & Software • Journal of Global Optimization • SIAM Journal of Optimization • European Journal of Operational Research • Mathematical Programming
Andreas Futschik	• Mathematical Reviews (1) • Plant Ecology & Diversity (2) • Statistical papers (1) • Molecular Ecology (1)
Andrea Gaunersdorfer	• Games (1)
Stefan Gollowitzer	• Applied Mathematical Modelling (1) • European Journal of Operational Research (1) • International Symposium on Combinatorial Optimization (1)
Walter J. Gutjahr	• Annals of Operations Research (2) • Central European Journal of Operations Research (5) • Computers and Operations Research (1) • European Journal of Operational Research (2) • Flexible Services and Manufacturing (1) • IIE Transactions (1) • Information Processing Letters (1) • Information Sciences (1) • International Journal of Information Technology and Decision Making (1) • International Journal of Production Research (1) • Journal of Scheduling (1) • Optimization Methods and Software (1) • Naval Research Logistics (1) • Software Practice and Experience (1) • Swarm Intelligence (1) • Transactions on Evolutionary Computation (1)
Hannes Leeb	• Annals of Statistics (2) • Econometric Theory (2) • IEEE Transactions on Computer Science (1) • Journal of the American Statistical Association (1) • Journal of Applied Econometrics (1) • Journal of Econometrics (2) • Psychological Testing and Assessment Modelling (1) • Scandinavian Journal of Statistics (1) • Test (1)
Raimund Kovacevic	• Central European Journal of Operations Research (1) • OR Spectrum (1) • Insurance: Mathematics and Economics (1) • Advances in Operations Research (1)

[1] incomplete list

Ivana Ljubic	• Annals of Operations Research (1) • Computers & Operations Research (1) • European Journal of Operational Research (1) • Journal on Global Optimization (1) • Operations Research (1)
Alois Pichler	• European Journal of Operational Research (1) • Quantitative Finance (1)
Benedikt M. Pötscher	• Metrika
Stefan Rath	• OR Spectrum (1)
Werner Schachinger	• Discrete Mathematics and Theoretical Computer Science (1)
Ulrike Schneider	• Biostatistics (1) • Journal of Nonparametric Statistics (1) • Metrika (1)

9.3 Other Professional Activities

Immanuel M. Bomze	• Scientific Advisory Board, CMA, New University of Lisbon, Portugal • Reviewer for Nederlandse Organisatie voor Wetenschappelijk Onderzoek (NWO), The Netherlands • Deputy Director of Doctoral Studies Programme Business, Economics and Statistics
Florian Frommlet	• Member of Executive Board, Austrian Society of OR (ÖGOR)
Andreas Futschik	• Member of Program Committee, MASAMB 2011, Vienna, Austria • Member of Organizing Committee, ISCB 2014, Vienna, Austria • Member of Executive Board, ÖSG
Andrea Gaunersdorfer	• Director of Studies Programme Business, Economics and Statistics (until September) • Vice Dean of Faculty of Business, Economics and Statistics (since October)
Stefan Gollowitzer	• Member of Austrian Society of OR (ÖGOR)
Walter J. Gutjahr	• Member of Program Committee, ANTS 2010 • Member of Program Committee, GECCO 2010 • Member of Program Committee, LION 2011 • Member of Program Committee, Matheuristics 2010, Vienna, Austria • Member of Program Committee, QSIC 2010 • Member of Program Committee, SBST 2010 • Member of Program Committee, SSBSE 2010 • Deputy Director of Studies Programme Business, Economics and Statistics (since October)

Irene Klein	• Co-Organizer of the conference “Analysis, Stochastics, Applications – a conference in honour of Walter Schachermayer”, Vienna, Austria • Deputy Director of Studies Programme Business, Economics and Statistics (until September)
Ivana Ljubic	• Member of Program Committee, Matheuristics 2010, Vienna, Austria • Member of council of INFORMS Telecom Section • Organizer of 2 invited sessions on Location & Network Design and Combinatorial Optimization at the 24th European Conference on Operational Research (EURO 2010)
Georg C. Pflug	• Organizer of the Computational Management Science (CMS) 2010 conference, Vienna, Austria • Member of Central Research Committee of the University of Bozen • Dean of Faculty of Business, Economics and Statistics (until September)
Benedikt M. Pötscher	• Member of ASA • Member of IMS • Member of Econometric Society • Member of Verein fuer Socialpolitik (Ausschuss für Oekonometrie) • Head of Department (since October)
Erhard Reschenhofer	• Head of Department (until September)
Werner Schachinger	• Deputy Head of Department (until September and since October)