

Ulrich Pferschy

Curriculum Vitae

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Personal Data

born 02.07.1968; Nationality: Austrian

Family married, two children aged 8 and 5

Education

1992–1995 **Dr.techn.**, *Graz University of Technology, Degree with Honors*, PhD program in Technical Mathematics.

PhD-thesis: *On Three Topics in Combinatorial Optimization*,
supervisors: Rainer E. Burkard, Franz Rendl

1986–1991 **Dipl.-Ing.**, *Graz University of Technology, Degree with Honors*, Study of Technical Mathematics with specialization in Computer Science.

Diploma thesis: *Mathematical Programs with a Two-Dimensional Reverse Convex Constraint*, supervisors: Hoang Tuy (Hanoi), Rainer E. Burkard (Graz)

Professional Career

since 10.2014 **Head of Department**, *Department of Statistics and Operations Research*.

2013 **Habilitation**, *Area: Operations Research*, Italian Ministry of Education, Universities and Research (MIUR), *Abilitazione Scientifica Nazionale Prima Fascia*.
Qualification for Full Professor in Italy

04.2006–
02.2010 **Head of Department**, *Department of Statistics and Operations Research*.

since 10.2001 **Associate Professor (ao.Univ.-Prof.)**, *University of Graz*, Faculty of Business, Economics and Social Sciences, Department of Statistics and Operations Research.

06.2001 **Habilitation**, *Venia: Quantitative Betriebswirtschaftslehre*, Habilitation Treatise: *Knapsack Problems and Applications*, University of Graz.

01.1996–
09.2001 **University Assistant (Post-Doc)**, *University of Graz*, Department of Statistics and Operations Research.

08.1992–
12.1995 **Research Associate**, *Graz University of Technology*, Department of Mathematics.

Contributing to FWF-Projects *Dynamic Flow Problems and Inverse-Parametric Optimization* and FWF-SFB *Optimization and Control*

Professional Recognition

- Bibliometrics Hirsch-Index: $h = 24$ (Google Scholar), $h = 19$ (Web of Science), $h = 17$ (Scopus), $h = 22$ (Arnetminer)
- 05.2007 **Offer of a W3-Professorship, Chair in Operations Research**, University of Trier.
declined because of insufficient funding
- 2005–2009 **Shortlisted for Full Professorships**, ranked on second position, University of Augsburg, Zürich, Karlsruhe (TH), Erlangen-Nürnberg.
In all occasions the first-listed candidate accepted the position.
- since 2005 **Regular participant of the prestigious Combinatorial Optimization Workshop in Aussois.**
Invitations to highly prestigious workshops in Oberwolfach and Dagstuhl.
- 2003 **Best Lecturer Award**, by the Faculty of Business, Economics and Social Sciences, University of Graz.
- 1992 **Award of the Austrian Operations Research Society, Best Diploma Thesis.**

Visiting Professorships

- 2016 **Università Roma Tre, Department of Engineering.**
Visiting Ricerca-Dottorato
- 2012 **Università Roma Tor Vergata, Department of Informatics, Systems and Production.**
Professore Visitatore
- 2010 **Università Roma Tre, Department of Informatics.**
Docenza Internazionale nelle Scuole Dottorali
- 2006, 2008 **University of Klagenfurt, Department of Mathematics.**
- 2005 **University of Dortmund, Institute for Algorithm Engineering**, full-time for one semester.
- 2002 **Vienna University of Technology, Department of Algorithms and Data Structures**, full-time for one semester.

Activities in the Scientific Community

- Member of the Editorial Board:
EJOR *European Journal of Operational Research*,
MMOR *Mathematical Methods of Operations Research*,
JOCO *Journal of Combinatorial Optimization*,
CJOR *Central European Journal of Operations Research*
- Referee for the Israel (ISF), the United States-Israel Binational (BSF), the Italian (MIUR), the Turkish (TUBITAK), the Australian (CSIRO) and the Hungarian (OTKA) Science Foundations, for OeAD, the Austrian Ministry of Research (BMWFV) and the Einstein Foundation Berlin.

- Reviewer for ≥ 50 international journals in the areas of Management Science, Operations Management, Optimization and Algorithms (≥ 20 reviews per year)
- Regular reviewer for numerous high-level conferences
- Reviewer for several habilitation treaties
- Reviews for full professorship appointment processes
- Member of several university committees (Curricular Committee for the PhD-program, Faculty Council, etc.)
- Member of the board and treasurer of the Austrian Operations Research Society (ÖGOR) (1998-2008)

International Visibility

- Talks at ≥ 75 international conferences and workshops in the areas of Management Science, Operations Management, Optimization
- 58 co-authors, among them 35 non-Austrian
- Organization of several conference streams and sections in the area of Operations Research and Combinatorial Optimization
- Member of numerous program committees
- Founder of the workshop series *Future Research in Combinatorial Optimization* (FRICO)
- Member of the EU-Project COST Action IC 0602 *Algorithmic Decision Theory* (2007-2010)
- Erasmus+ Teaching Mobility with Università Roma Tre
- Erasmus Student and Staff Mobility Agreement with Università Roma Tor Vergata

- Invited talks at ≥ 30 universities and conferences, among them:
 - University of Szeged (Hungary) (1996, 2012)
 - University of Vienna (1999)
 - University of Bologna (Italy) (1997, 2001)
 - RWTH Aachen (2002)
 - University of Brescia (Italy) (1997, 2004, 2007)
 - KOI 2004: 10th International Conference on Operational Research, Trogir (Croatia), invited plenary speaker (2004)
 - University of L'Aquila (Italy)(2004)
 - Università Roma Tre (Italy) (2004, 2015, 2016)
 - University of Pisa (Italy) (2005)
 - University of Augsburg (Germany) (2005)
 - University of Cologne (Germany) (2005)
 - University of Zurich (Switzerland) (2005)
 - TU Kaiserslautern (Germany) (2006)
 - University Roma Tor Vergata (Italy) (2006, 2012, 2013)
 - ICM07: International Conference on Management, University of Wuhan (China), invited plenary speaker (2007)
 - University of Karlsruhe (Germany) (2008)
 - University of Erlangen-Nürnberg (Germany) (2009)
 - Université de Liège (Belgium) (2009)
 - University of Ulm (Germany) (2009)
 - AIRO Associazione Italiana di Ricerca Operativa Winter 2011, Cortina d'Ampezzo: invited keynote speaker (2011).
 - SOR '11: 11th International Symposium on Operational Research, Slovenia, invited plenary speaker (2011).
 - Vienna University of Economics and Business (2014)
 - University of Göttingen (Germany) (2016)
 - Politecnico di Torino (Italy) (2016)

Supervision of Theses

- supervised PhD-Theses:
 - Portfolio-Optimierung basierend auf ordinaler Information (Stephan Hafner, under completion)
 - Problems on tours and trees in combinatorial optimization (Rostislav Stanek, TU Graz, 2016)
 - Applied Metaheuristics for Logistical Challenges in Congested Urban Areas (Gerald Senarclens de Grancy, 2015)
 - Optimierung von Ladeeinheiten in der Distributionslogistik (Gerald Hubmann, 2011)
 - Conflict Graphs in Combinatorial Optimization: Algorithms and Complexity (Joachim Schauer, 2010)
 - Squeaky Wheel Optimization (Martin Nussbaumer, 2008)
 - Algorithmen zur profitoptimalen Auftragsplanung unter Zeit- und Ressourcenrestriktionen (Franz Dorfer, 2007)
 - Optimale Disposition komplexer Logistikketten durch Tabu-Search (Robert Brugger, 2003)
 - Einsatz der Methoden des Qualitätsmanagements im betrieblichen Leistungsprozess am Beispiel der Fahrzeugindustrie (Rene Lind, 2002)
- second supervisor and examiner for numerous PhD-Theses at the University of Graz, TU Vienna and TU Graz
- President of the PhD-Jury and examiner at the Politecnico di Torino (Italy) (Rosario Scatamacchia, 2017)
- supervised ≈ 50 Diploma- and Master-Theses for students of Business Administration (BWL) mainly in area of Operations Management, Production and Logistics
- co-supervised Diploma-Theses for students of Technical Mathematics (TU Graz)
- supervised 5–10 Bachelor-Theses per year

Languages and Soft Skills

German **Native**

English **Proficient**

Italian **Intermediate**

Soft skills Completed courses offered by the University of Graz:

*Fortbildungsprogramm für Führungskräfte, Projektmanagement, Forschungskoope-
ration, Verhandlungstechnik, Arbeit mit Gremien, Arbeitsrecht*

Teaching Activities

- University of Graz
 - Basic Courses in Mathematics and Statistics
 - *Wirtschaftsmathematik* (2014 –)
 - *Statistik* (2009 –)
 - *Masterkurs Wirtschaftsmathematik und Statistik* (2009 –)
 - *Wirtschaftsmathematik, Statistik* (exercises) (1996-2008)
 - Specialized Courses in the area of Production and Logistics
 - *Graphenalgorithmen* (2012 –)
 - *Betriebliche Optimierung* (2013)
 - *Verfahren des Operations Research* (2011 –)
 - *Methoden des Operations Research* (2003-2010)
 - *Transport- und Routenplanung* (exercises) (2002)
 - *Qualitätsmanagement* (2001-2014)
 - *Statistische Qualitätskontrolle und Instandhaltung* (exercises) (1997-2000)
 - *Lineare und ganzzahlige Optimierung* (exercises, partially in English) (1996-2000)
 - *Simulation und Warteschlangen* (exercises) (1997)
 - Advanced Courses
 - Seminars in Operations Research and Master-Seminars (2002 –)
 - Research Seminar in Management Science (2010 –)
 - *Mathematische Methoden* (for PhD-Students, also in English) (2009-2013)
 - *Foundations of Optimization* (for PhD-Students, in English) (2006-2007)
 - Seminars in Financial and Industrial Management (2002-2010)
- Technical University of Vienna
 - *Approximationsalgorithmen* (2004-2012)
 - Seminars in Operations Research and Algorithmics (2005-2007)
 - *Praktische Informatik* (2002-2003)
 - *Packungs- und Zuschnittprobleme* (2002-2003)
 - *Aktuelle Themen der kombinatorischen Optimierung* (seminar) (2002-2003)
- Università Roma Tre
 - Mini-Courses (in English) for Master- and Phd-Students on *Advanced Linear and Integer Optimization Methods* (2010), *Routing and Clustering Algorithms* (2009), *Combinatorial Optimization and Approximation* (2006)
- University of Klagenfurt
 - *Kombinatorische Optimierung* (2008-2009)
 - *Ganzzahlige Optimierung* (2006-2007)
 - Seminar in Operations Research (2006-2009)
- University of Dortmund
 - *Packungs- und Zuschnittprobleme* (2005-2006)
 - *Algorithm Engineering* (2005-2006)

- Graz University of Technology
 - *AK Optimierung (Approximationsalgorithmen)* (2003)
 - *Operations Research* (in English) (2000)
 - *Theoretische Informatik 1 und 2* (1993-1995)
 - Exercise Classes for *Mathematik 1-4* for Students of Engineering (1990-1995)

Research Projects Funded by Public Sources

- FWF-project P 23829-N13: *Graph Problems with Knapsack Constraints*, 2 researcher positions for 3 years (2012-2015)
- Unconventional Research: *Choice-Selection-Decision*, competitive research funded by the University of Graz (partner in a project led by Richard Sturn, Department of Public Economics) 2 researcher positions for 3 years (2014-2017)
- *Optimierung der Verpflegungslogistik beim österreichischen Bundesheer*
Partner: Bundesministerium für Landesverteidigung und Sport (BMLVS) (2012-2013)
- Teams of young researchers: *Voting and Selection on Discrete Structures*, competitive research funded by the University of Graz (jointly with Christian Klamler, Department of Public Economics) 1 researcher position for 3 years (2007-2010)
- Personal research grant by the faculty: *Optimization Problems in Logistics*, 1 researcher position for 3 years (2007-2010)
- FH-Plus project of the Austrian Research Promotion Agency (FFG) led by the FH Technikum Kärnten: *NETQUEST: Optimization algorithms in planning the last mile of fiber optic networks* (2005-2008)

Research Projects with Funding from Industry (since 2010)

- *Model-Mix Optimierung bei der One-Piece-Flow Fertigung*
Partner: SCC EDV-Beratung AG (2017 –)
- *Collaborative Robotics*
Partner: Joanneum Research ForschungsgesmbH, (2016 –)
- *Optimierung der Intra-Logistik bei komplexen Lagerstrukturen*
Partner: Blue Tomato GmbH (2016-2017)
- *Mathematische Optimierung von One-Piece-Flow Fertigungssystemen*
Partner: SCC EDV-Beratung AG, funding by FFG (2015-2016)
- *Optimierung der Ausgangsbelegung von elektrischen Schaltkästen*
Partner: Elsta Mosdorfer GmbH (2016)
- *NISS: Nutzungs- und Instandhaltungssteuerungssystem*
Partner: Joanneum Research ForschungsgesmbH, Bundesministerium für Landesverteidigung und Sport (BMLVS) (2014-2016)
- *Standortplanung mit optimaler Wirkung*
Partner: Österreichische Post AG, Joanneum Research ForschungsgesmbH (2014-2016)
- *Optimale Personalplanung bei strukturierten Qualifikationen*
Partner: Bühnen Graz: Grazer Spielstätten (2013-2014)
- *Strategieoptimierung der Einführung des Smart Metering*
Partner: Brückler Consulting, funding by FFG (2012-2013)

- *Algorithmus für die Marketing-Mix Optimierung*
Partner: UPPER Network, funding by FFG (2011-2013)
- *Auslastungsoptimierung in der Business Aviation*
Partner: Globe Air, funding by FFG (2010)
- *Automatisierte Beladung von Paletten mit heterogenem Stückgut*
Partner: Fa. Klug integrierte Systeme, Teunz (Bayern) (2010-2011)