Curriculum vitae

Name:	Marc Reimann
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E-mail:	marc.reimann@ifor.math.ethz.ch
Date of birth:	January 31, 1974
Nationality:	Austrian
Languages:	German (mother tongue), English (fluent), Russian (basic)

Education:	**PhD** January 2003 Business Administration, University of Vienna **Thesis:** Ant based Optimization in Goods Transportation **Advisor:** Prof. Dr. Richard F. Hartl **MSc** August 1998 International Business, University of Vienna **Thesis:** Tourenplanung: Theorie und Praxis (in German) **Advisor:** Prof. Dr. Richard F. Hartl
Studies abroad:	July 14th – July 27th 2002 SFI Graduate Workshop in Computational Economics, Santa Fe, NM July 15th – August 9th 2001 SFI Complex Systems Summer School, CEU Budapest
Academic appointments:	2004 – present Senior Scientist (untenured) ETH Zurich, Institute for Operations Research (IFOR) 1998 – 2003 Research and Teaching Assistant University of Vienna, Center for Business Studies (BWZ)
Other research and teaching experience:	August 10th, 1998 – October 2nd, 1998 Intern, research on Supply Chain Management Plaut Consulting Inc., Boston and Chicago, USA September 1997 – June 1998 Student tutor, Production and Operations Management University of Vienna, Austria
Research interests:	Quantitative analysis and optimization of logistics systems, interface supply and demand management, adaptive and anticipative behavior of firms in supply chains

Honors/Awards:	Nominated for Best Paper Award at EvoCOP 2004 Erwin Schroedinger Fellowship awarded by the Austrian Science Fund (FWF) (declined) OEGOR (Austrian Society for Operations Research) Prize for the best PhD dissertation on an OR related topic in 2003 Best Paper Award in the program track 'Evolutionary Scheduling and Routing' at GECCO 2002 Student Travel Grant for GECCO 2001 and 2002, awarded by American Association for Artificial Intelligence (AAAI) Studentship for excellent achievements, awarded by the University of Vienna 1999
Teaching experience:	1998 – 2003 University of Vienna *UE GZ BWL IV: Produktion und Logistik (1h)* *UE Produktion und Logistik für Fortgeschrittene (2h)* Introductory and intermediate courses on models and solution methods in production and logistics *UE Unternehmenslogistik (1h)* Advanced course on quantitative techniques for solving problems in corporate logistics *PR Modellierung und Analyse von Produktionssystemen (1h)* Hands-on course on the implementation of solution techniques for analyzing problems in production and logistics *EK ABWL Produktion und Logistik (2h)* *VK ABWL Produktion und Logistik (2h)* Introductory lecture/course on models and solution techniques in production and logistics (joint with Prof. Hartl) *VK Transportation Logistics (4h)* (held in English) Advanced lecture on quantitative models and solution techniques in goods transportation (joint with Prof. Hartl) *SE Produktion und Logistik: Machine Scheduling (2h)* (held in English) Seminar on state-of-the-art models and solution techniques in machine scheduling (joint with Prof. Hartl) 2005 – 2006 ETH Zurich *Quantitative Logistics Analysis (3h)* Intermediate lecture on quantitative models and solution techniques in Supply Chain Management *System Modeling and Optimization (3h)* Introductory lecture on application of OR techniques in a business context (joint with Prof. Luethi, Dr. Hinz and Dr. Laumanns) 1998 – 2006 University of Vienna and ETH Zurich Supervision of several MSc and PhD students

Scientific project work:	Researcher: Capacity Management and Contract Engineering, funded by Lonza AG, completed 06/2006 SFB 010 - Adaptive Information Systems and Modelling in Economics and Management Sciences, funded by FWF, completed 02/2004. Resitant – Ressourcenmanagement im Transport, funded by Oesterreichische Nationalbank (OENB), completed 12/2003. Dracula - Optimierung der Blutkonserventransportlogistik, funded by BMVIT, completed 08/2004. Project partner: Kooperative Liefernetze, funded by BMVIT, completed 02/2005. (jointly with Manfred Gronalt, BOKU WIEN) Other projects with industrial partners: Austria - Gebrüder Weiss, WigeoGIS, Austrian Red Cross Switzerland - Planzer AG, Synthes Europe GmbH, AMAG
Related professional experience:	Member of Editorial Board: Computers and Operations Research Referee for: European Journal of Operational Research, Springer Lecture Notes in Computer Science, International Journal of Industrial Organization, Annals of Operations Research, Journal of Artificial Intelligence Research, Computers and Operations Research, Central European Journal for Operations Research, Journal of Heuristics, Transportation Science, International Journal of Production Economics, Springer: Operations Research/Management Science, Optimization and Engineering, IEEE Intelligent Systems, Journal of Global Optimization Member of Program Committees: EvoCOP 2002, 2003, 2004, 2005, 2006 GECCO 2005, 2006 MIC 2005 Ants 2006 Membership of academic societies: INFORMS, POMS, EUROMA Administrative Committee work: Member of the Library committee, Center of Business Studies, University of Vienna Member of the Faculty Travel Fund committee, Center of Business Studies, University of Vienna

References:

Prof. Dr. Herbert Dawid
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Zurich, October 2006

Publications

Summary:

2 Edited volumes
11 Journals
- 2 VHB-Jourqual A
- 3 VHB-Jourqual B
- 3 VHB-Jourqual C
- 1 ISI ranked Journal (IEEE Transactions on Evolutionary Computation):
  Impact Factor 2005: 3.257 (15^{th} among 352 CS journals)
- 1 sole authorship

14 Papers in conference proceedings
- 6 VHB-Jourqual B
- 4 VHB-Jourqual D

7 Miscellaneous publications

Edited volumes:

Doerner, K. and Reimann, M. (2007): Logistics of Health Care Management, Focused Issue in **Computers and Operations Research 24** (3)**.**

Dawid, H., Doerner, K., Dorffner, G., Fent, T., Feurstein, M., Hartl, R.F., Mild, A., Natter, M., Reimann, M. and Taudes A. (2002): Quantitative models of learning organisations, Springer, Wien.

Journals:

Reimann, M.: Analyzing risk orientation in a stochastic VRP, to appear in: **European Journal of Industrial Engineering**.

Doerner, K., Hartl, R.F., Kiechle, G., Polacek, M. and Reimann, M.: Scheduling Periodic Customer Visits for a Travelling Salesperson, to appear in: **European Journal of Operational Research**.

Reimann, M. and Ulrich, H. (2006): Comparing backhauling strategies in vehicle routing using Ant Colony Optimization, **Central European Journal of Operations Research 14** (2) pp 105—123.

Reimann, M. and Laumanns, M. (2006): Savings based Ant Colony Optimization for the Capacitated Minimum Spanning Tree Problem, **Computers and Operations Research 33** (6) pp 1794—1822.

Doerner, K., Gutjahr, W.J., Hartl, R.F., Karall, M. and Reimann, M. (2005): Heuristic solution of an extended double-coverage location problem for Austria, **Central European Journal of Operations Research 13** (4) pp 325—340.

Dawid, H. and Reimann, M. (2004): Evaluating Market Attractiveness: Individual Incentives vs. Industry Profitability, **Computational Economics 24** (4) pp 321—355.

Reimann, M., Doerner, K. and Hartl, R.F. (2004): D-Ants: Savings based Ants divide and conquer the VRP, **Computers and Operations Research 31** (4) pp 563—591.

Doerner, K., Hartl, R.F., Polacek, M. and Reimann, M. (2004): A Variable Neighborhood Search for the Multi Depot Vehicle Routing Problem with Time Windows, **Journal of Heuristics 10** (6) pp 613—627.

Doerner, K., Hartl, R.F. and Reimann, M. (2003): CompetAnts for problem solving - the case of full truckload transportation, **Central European Journal of Operations Research 11** (2) pp 115—141.

Gronalt, M., Hartl, R.F. and Reimann, M. (2003): New Savings Based Algorithms for Time Constrained Pickup and Delivery of Full Truckloads, **European Journal of Operational Research 151** (3) pp 520—535.

Dawid, H., Reimann, M. and Bullnheimer, B. (2001): To Innovate or Not To Innovate?, **IEEE Transactions on Evolutionary Computation 5** (5) pp 471—481.

Conference proceedings and multi-author books:

Schiltknecht, P. and Reimann, M. (2005): *Valuing product portfolios under uncertainty and limited capacity*, in: Haasis et al. (Eds.): Operations Research Proceedings 2005, Springer, Berlin/Heidelberg, pp 185—190.

Reimann, M., (2005): *Analyzing a vehicle routing problem with stochastic demands using Ant Colony Optimization*, in: Jaszkiewicz et al. (Eds.): Advanced OR and AI Methods in Transportation, Poznan Technical University Publishers, Poznan, pp 764—769.

Reimann, M. and Laumanns, M. (2004): *A hybrid ACO algorithm for the Capacitated Minimum Spanning Tree Problem*, in: Blum et al. (Eds.): Proceedings of First International Workshop on Hybrid Metaheuristics (HM2004), pp 1—10.

Doerner, K., Hartl, R.F., Kiechle, G., Lucka, M. and Reimann, M. (2004): *Parallel Ant Systems for the Capacitated Vehicle Routing Problem*, in: Gottlieb, J. and Raidl, G. (Eds.): Evolutionary Computation in Combinatorial Optimization, Springer LNCS 3004, pp 72—83.

Brugger, B., Doerner, K., Hartl, R.F. and Reimann, M. (2004): *AntPacking - An Ant Colony Optimization Approach for the One-dimensional Bin Packing Problem*, in: Gottlieb, J. and Raidl, G. (Eds.): Evolutionary Computation in Combinatorial Optimization, Springer LNCS 3004, pp 41—50.

Reimann, M., Doerner, K. and Hartl, R.F. (2003): *Analyzing a unified Ant System for VRPs and some of its variations*, in: Raidl et al. (Eds.): Applications of Evolutionary Computing, Springer LNCS 2611, Berlin/Heidelberg, pp 300—310.

Doerner, K., Gronalt, M., Hartl, R.F., Reimann, M. and Zisser, K. (2002): *VRP with interdependent time windows - A case study for the Austrian Red Cross blood programme*, in: Leopold-Wildburger et al. (Eds.): Operations Research Proceedings 2002, Springer, Berlin/Heidelberg, pp 144—149.

Reimann, M. and Doerner, K. (2002): *Savings based Ants for large scale Vehicle Routing Problems*, in: Leopold-Wildburger et al. (Eds.): Operations Research Proceedings 2002, Springer, Berlin/Heidelberg, pp 181—186.

Reimann, M., Doerner, K. and Hartl, R.F. (2002): *Insertion based Ants for Vehicle Routing Problems with Backhauls and Time Windows*, in: Dorigo et al. (Eds.): Ant Algorithms, Springer LNCS 2463, Berlin/Heidelberg, pp 135—147.

Reimann, M., Stummer, M. and Doerner, K. (2002): *A Savings based Ant System for the Vehicle Routing Problem*, in: Langdon et al. (Eds.): Proceedings of the Genetic and Evolutionary Computation Conference (GECCO 2001), Morgan Kaufmann, New York, pp 1317—1325.

Doerner, K., Gronalt, M., Hartl, R.F., Reimann, M., Strauss, Ch. and Stummer, M. (2002): *SavingsAnts for the Vehicle Routing Problem*, in: Cagnoni et al. (Eds.): Applications of Evolutionary Computing, Springer LNCS 2279, Berlin/Heidelberg, pp 11—20.

Dawid, H., Doerner, K., Hartl, R.F. and Reimann, M. (2002): *Ant based computation in the management sciences*, in: Dawid et al: Quantitative models of learning organisations, Springer, Berlin/Heidelberg, pp 65—94.

Doerner, K., Hartl, R.F. and Reimann, M. (2001): *Cooperative Ant Colonies for Optimizing Resource Allocation in Transportation*, in Boers et al. (Eds.): Applications of Evolutionary Computing, Springer LNCS 2037, Berlin/Heidelberg, pp 70—79.

Doerner, K., Hartl, R.F. and Reimann, M. (2001): *Ants Solve Time Constrained Pickup and Delivery Problems with Full Truckloads*, in Fleischmann et al. (Eds.): Operations Research Proceedings 2000, Springer, Berlin/Heidelberg, pp 395—400.

Other publications:

Gronalt, M. and Reimann, M. (2004): *Cooperation in Distribution Networks - The effects of information sharing*, in: Preprints of the Triennial Symposium on Transportation Analysis (Tristan V), Guadeloupe, CD-ROM.

Doerner, K., Hartl, R.F., Maniezzo, V. and Reimann, M. (2004): *Applying Ant Colony Optimization to the Capacitated Arc Routing Problem*, in: Dorigo et al. (Eds.): Ant Colony Optimization and Swarm Intelligence, Springer LNCS 3172, pp 420—421.

Doerner, K., Gronalt, M., Hartl, R.F., Reimann, M. and Zisser, K. (2003): *Scheduling blood collecting vehicles for the Austrian Red Cross*, in: Preprints of ODYSSEUS, Italy, CD-ROM.

Doerner, K., Hartl, R.F. and Reimann, M. (2001): *Are COMPETants more competent for problem solving? - the case of a routing and scheduling problem*, in: Specter et al. (Eds.): Proceedings of the Genetic and Evolutionary Computation Conference (GECCO-2001), Morgan Kaufmann, San Francisco, p. 802.

Reimann, M., Shtovba, S. and Nepomuceno, E. (2001): *A hybrid ACO-GA approach to solve Vehicle Routing Problems*, Student Papers of the Complex Systems Summer School, Budapest July 15 - August 9 2001, Santa Fe Institute

Reimann, M. (2001): *On some ideas for Multi-Colony Ant Approaches*, GECCO 2001 Graduate Student Workshop, pp 437—440, 7 July 2001, San Francisco, USA.

Doerner, K., Gronalt, M., Hartl, R.F. and Reimann, M. (2001): *Optimizing Real Time Operations in Transportation with an Ant System*, in: Preprints of the Triennial Symposium on Transportation Analysis (Tristan IV), Sao Miguel, Portugal, pp. 701--705.

Submitted manuscripts:

Dawid, H. and Reimann, M. (2004): Diversification: A road to inefficiency in product innovation, submitted to **Journal of Evolutionary Economics**

Doerner, K., Gronalt, M., Hartl, R.F., Kiechle, G. and Reimann, M. (2004): Exact and heuristic algorithms for the vehicle routing problem with multiple, interdependent time windows, submitted to **Transportation Science**

Scientific Talks

2006	*Analyzing risk orientation in a stochastic VRP,* NOW 2006, St Remy de Provence, August 22-25, 2006
	Capacity Management and Contract Engineering to mitigate Supply chain Risk, EURO 2006, Reykjavik, July 2-5, 2006
	Valuation of product portfolios in manufacturing under uncertain demands, POMS International Conference, Shanghai, June 19-23, 2006
2005	*Analyzing a vehicle routing problem with stochastic demands using Ant Colony Optimization,* 10th Meeting of the EURO Working Group on Transportation, Poznan, September 13-16 2005
	Ant Colony Optimization for VRPs, Research Seminar, Institute for Theoretical Computer Science, ETH Zurich, February 22 2005
2004	*Capacity Management and Contract Engineering in a stochastic Make-To-Order Environment,* Research seminar, University of Vienna, October 22 2004
	Applying a Variable Neighborhood Ant System to the Capacitated Vehicle Routing Problem, GOR Meeting, Tilburg, Netherlands, September 1-3 2004
	Cooperation in Distribution Networks – The effects of information sharing, Tristan V, Guadeloupe, June 13-18 2004
	AntPacking - Ants Pack One-Dimensional Bins, CORS/INFORMS Meeting, Banff, May 16-19 2004
	A Variable Neighborhood Search for the Multi Depot Vehicle Routing Problem with Time Windows, Optimization Days, Montreal, Canada, May 10-12 2004
	Ant based Optimization in the logistics of goods transportation, Optimization Seminar, ETH Zurich, Switzerland, March 11 2004
2003	*Ant based Optimization in goods transportation,* Annual Meeting of the Austrian Society for Operations Research (OEGOR), Wr. Neustadt, Austria, November 14 2003
	D-Ants Divide and Conquer VRPs, Informs Annual Meeting, Atlanta, USA, October 19-22 2003
	D-Ants: Savings based Ants for large scale VRPs, Research Seminar, ETH Zurich, Switzerland, August 12 2003

	D-Ants Divide and Conquer the VRP, Optimization Days, Montreal, Canada, May 5-7 2003
	Ant Systems Applied to Switch Engine Assignment and Routing in a Railroad Yard, Optimization Days, Montreal, Canada, May 5-7 2003
	Analyzing a Unified Ant System for the VRP and Some of its Variants, EvoCOP, Colchester, UK, April 14-16 2003
2002	*Savings based Ants for large scale Vehicle Routing Problems*, OR 2002, Klagenfurt, Austria, September 2-5 2002
	Savings based Algorithms for Real World Routing Problems, Sintef, Oslo, Norway, August 27 2002
	Ant Colony Optimization, Sintef, Oslo, Norway, August 26 2002
	Disruptive Technologies and the Evolution of Market Shares, Santa Fe Graduate Student Workshop, Santa Fe, USA, July 14-27 2002
	A Savings based Ant System for the Vehicle Routing Problem, GECCO 2002, New York, USA, July 9-13 2002
	Innovation and Diversification in Short-lived Markets, Computing in Economics and Finance, Aix en Provence, France, June 27-29 2002
	Saving with Ants: The Vehicle Routing Problems, Optimization Days, Montreal, Canada, May 6-8 2002
2001	*A hybrid ACO-GA approach to solve Vehicle Routing Problems*, Santa Fe Complex Systems Summer School, Budapest, Hungary, July 15-August 9 2001
	On some ideas for Multi-Colony Ant Approaches, GECCO 2001, San Francisco, USA, July 7-11 2001
	Optimizing Real Time Operations in Transportation with an Ant System, Tristan IV, Azores, Portugal, June 13-19 2001
	Cooperative Ant Colonies for Optimizing Resource Allocation in Transportation, EvoCOP, Como, Italy, April 18-19, 2001
2000	*Pickup and Delivery of Full Truckloads under Time Window Constraints*, YOR 11, Cambridge, UK, March 28-30 2000
1999	*Do Local Content Schemes Encourage Innovation?*, Workshop on Economics with Heterogeneous Interacting Agents, Genua, Italy, June 4-5 1999