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## Personal data

name Fabien Tricoire  
date of birth January 23, 1978  
citizenship France  
spoken languages French (native), English (fluent), German & Spanish (conversational)

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## Affiliation

university University of Vienna  
faculty Faculty of Business, Economics and Statistics  
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## Education

2006 **PhD**, *Université de Nantes*, France.  
Vehicle and Personnel Routing Optimization in the Service sector  
2002 **Master**, *Université de Nice-Sophia Antipolis*, France.  
Scheduling of observation missions for an autonomous telescope  
2001 **Bachelor**, *Université de Nice-Sophia Antipolis*, France.  
Computer Science

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## Professional experience

Since 10/2014 **Assistant Professor**, *University of Vienna*.  
Chair for Production and Operations Management with International Focus  
10-2012–09/2014 **Assistant Professor**, *University of Vienna*.  
Chair for Production and Operations Management  
05/2011–06/2012 **Researcher**, *NICTA (Sydney)*.  
Project: Intelligent Fleet Logistics (applied research)  
10/2006–02/2011 **Assistant Professor**, *University of Vienna*.  
Chair for Production and Operations Management  
03/2006–09/2006 **Assistant Professor**, *École des Mines de Nantes*.  
Logistics and Production Systems  
2003–2006 **Applied Research**, *Veolia Water*, Nantes.  
Optimisation of logistics in water distribution systems

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## Technical skills

Programming C, C++, Java, Lisp, Python, Pascal, Scheme, Unix shell scripting

Optimisation software Gurobi, CPLEX, XPress-MP, Ip\_solve

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## Research interests

- operations management
- transport optimisation
- modelling
- vehicle routing
- green logistics
- multi-objective optimisation

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## Publications

- Under review S. N. Parragh and F. Tricoire, Branch and bound for biobjective integer optimization.  
F. Tricoire, J. Fechter and A. Beham, New insights on the block relocation problem.  
J. Grabenschweiger, F. Tricoire and K. F. Doerner, Finding the trade-off between gas emissions and disturbance in an urban context.
- Under revision T. Barthélémy, R. F. Hartl, S. N. Parragh and F. Tricoire, Beam search for integer multi-objective optimization.
- Working papers F. Tricoire, S.N. Parragh and W. Gutjahr, Linear programming techniques for bi-objective stochastic optimization.  
F. Lehuédé, O. Péton and F. Tricoire, Vehicle routing with balancing objectives.
- 2017 P. Matl, P. Nolz, U. Ritzinger, M. Ruthmair and F. Tricoire (2017), Bi-objective orienteering for personal activity scheduling. *Computers & Operations Research* 82:69-82  
F. Tricoire and S.N. Parragh, Investing in logistics facilities today to reduce routing emissions tomorrow, Accepted for publication in *Transportation Research Part B: Methodological*.  
S. Kritzinger, K. F. Doerner, R. F. Hartl, T. Stuetzle and F. Tricoire, A Unified Framework for Routing Problems with a Fixed Fleet Size. *International Journal of Metaheuristics*, accepted.
- 2016 K. Braekers, R. F. Hartl, S. N. Parragh and F. Tricoire (2016), A bi-objective homecare scheduling problem: Analyzing the trade-off between costs and client inconvenience. *European Journal of Operational Research* 248(2):428-443.
- 2015 S. Kritzinger, K.F. Doerner, F. Tricoire and R.F. Hartl (2014), Adaptive search techniques for problems in vehicle routing, Part II: A numerical comparison. *Yugoslav Journal of Operations Research* 25(2):169-184.  
S. Kritzinger, K.F. Doerner, F. Tricoire and R.F. Hartl (2014), Adaptive search techniques for problems in vehicle routing, Part I: A survey. *Yugoslav Journal of Operations Research* 25(1): 3-31.
- 2014 V. Cacchiani, V.C. Hemmelmayr, F. Tricoire (2014), A set-covering based heuristic algorithm for the periodic vehicle routing problem. *Discrete Applied Mathematics* 163(1):53-64  
F. Lehuédé, R. Masson, S.N. Parragh, O. Péton, F. Tricoire (2014), A multi-criteria large neighborhood search for the transportation of disabled people. *Journal of the Operational Research Society* 65:983-1000.
- 2013 C. Archetti, K.F. Doerner, F. Tricoire (2013), A heuristic algorithm for the free newspaper delivery problem. *European Journal of Operational Research* 230(2): 245-257.  
F. Tricoire, N. Bostel, P. Dejax, P. Guez (2013), Exact and hybrid methods for the Multiperiod Field Service Routing Problem. *Central European Journal of Operations Research* 21:359-377
- 2012 F. Tricoire, A. Graf, W.J. Gutjahr (2012), The bi-objective stochastic covering tour problem. *Computers & Operations Research* 39:1582-1592.

- F. Tricoire (2012), Multi-directional local search. *Computers & Operations Research* 39:3089-3101.
- 2011 F. Tricoire, K.F. Doerner, R.F. Hartl, M. Iori (2011), Heuristic and Exact Algorithms for the Multi-Pile Vehicle Routing Problem. *OR Spectrum* 33:931-959.
- S. Kritzing, F. Tricoire, K.F. Doerner, R.F. Hartl (2011), Variable Neighborhood Search for the Time-Dependent Vehicle Routing Problem with Soft Time Windows. in: C.A. Coello Coello (Ed.), *Learning and Intelligent Optimization LION 2011, Lecture Notes in Computer Science* 6683:61-75.
- E. Gussmagg-Pfliegl, F. Tricoire, K.F. Doerner, R.F. Hartl, S. Irnich (2011), Heuristics for a real-world mail delivery problem. *Applications of Evolutionary Computation EvoApplications 2011, Lecture Notes in Computer Science* 6625:481-490.
- 2010 J. Strodl, F. Tricoire, K.F. Doerner, R.F. Hartl (2010), On index structures in hybrid metaheuristics for routing problems with hard feasibility checks: an application to the 2-dimensional loading vehicle routing problem. *Hybrid Metaheuristics HM 2010, Lecture Notes in Computer Science* 6373:160-173.
- F. Tricoire, M. Romauch, K.F. Doerner, R.F. Hartl (2010), Heuristics for the Multi-Period Orienteering Problem with Multiple Time Windows. *Computers & Operations Research* 37:351-367.
- 2008 N. Bostel, P. Dejax, P. Guez, F. Tricoire (2008), Multiperiod Planning and Routing on a Rolling Horizon for Field Force Optimization Logistics, book chapter in: *The Vehicle Routing Problem: Latest Advances and New Challenges*, Golden, B. et al. (eds.), Springer
- 2007 F. Tricoire (2007), Vehicle and personnel routing optimization in the service sector: application to water distribution and treatment, *4OR* 5:165-168.
- 2002 S. Moisan, M. Boer, C. Thiebaut, F. Tricoire, M. Thonnat (2002), A versatile scheduler for automatic telescopes, *Proceedings of SPIE* (2002) 4844:262-272.

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## Presentations

- 2016 F. Tricoire, A. Beham and J. Fechter (2016), New advances for the block relocation problem, *VeRoLog 2016*, June 6-8, Nantes, France.
- F. Tricoire, K. Braekers, S. Parragh and Richard Hartl, A bi-objective home care scheduling problem, *Journée ROSa*, June 9 2016, Nantes, France.
- 2015 F. Tricoire, P. Kilby and S.N. Parragh (2015), Clustered orienteering and route attractiveness for freight transportation, *Odysseus 2015*, June 1-5, Ajaccio, France.
- F. Tricoire, W. Gutjahr and S.N. Parragh, Bi-objective stochastic facility location, *OR 2015: Annual International Conference of the German Operations Research Society*, Vienna, Austria.
- 2014 F. Tricoire, S.N. Parragh (2014), Branch and bound for the biobjective team orienteering problem with time windows. *VeRoLog 2014*, June 22-25 2014, Oslo, Norway.
- F. Tricoire, Walter Gutjahr, S.N. Parragh (2014), Linear programming for bi-objective stochastic logistics. *Recent advances in multi-objective optimization*, September 12 2014, Vienna, Austria.
- 2013 S.N. Parragh, F. Tricoire (2013), The biobjective team orienteering problem with time windows. *EURO/INFORMS 2013*, July 1-4 2013, Rome, Italy.
- F. Tricoire, S.N. Parragh (2013), Bound sets for the biobjective team orienteering problem with time windows. *VeRoLog 2013*, July 7-10 2013, Southampton, England.
- 2012 C. Archetti, K.F. Doerner, F. Tricoire (2012), Free Newspaper Delivery Optimisation. *Odysseus 2012*, May 21-25 2012, Mykonos, Greece.
- 2011 S. Kritzing, F. Tricoire, K.F. Doerner, R.F. Hartl (2011), Variable neighborhood search for the time-dependent vehicle routing problem with soft time windows. *IFORS 2011*, July 11-15, Melbourne, Australia.

- 2010 C. Archetti, K.F. Doerner, F. Tricoire (2010), The Free Newspaper Delivery Problem. Tristan VII, June 20-25 2010, Tromsø, Norway.
- C. Archetti, K.F. Doerner, F. Tricoire (2010), Hybrid solution methods for the free newspaper delivery problem. Matheuristics 2010 June 28-30, Vienna, Austria.
- K.F. Doerner, E. Gussmagg-Pfieggl, R.F. Hartl, F. Tricoire (2010), A Hybrid Approach for Real World Postman Problems. ALIO-INFORMS 2010, Buenos Aires, Argentina.
- W.J. Gutjahr, F. Tricoire (2010), The bi-objective stochastic covering tour problem. ALIO-INFORMS 2010, Buenos Aires, Argentina.
- W.J. Gutjahr, F. Tricoire (2010), Solving a stochastic bi-objective covering tour problem. EURO XXIV, 11-14 July 2010, Lisbon, Portugal.
- 2009 F. Tricoire, M. Romauch, K.F. Doerner, R.F. Hartl (2009), Algorithms for the Multi-Period Orienteering Problem with Multiple Time Windows. Odysseus 2009, Çeşme, Turkey, 26-29 May
- F. Tricoire, M. Romauch, K.F. Doerner, R.F. Hartl (2009), Variable neighborhood search for orienteering problems. MIC 2009, Hamburg, Germany, July 13-16
- F. Tricoire, M. Romauch, K.F. Doerner, R.F. Hartl (2009), Heuristics for the multi-period orienteering problem with multiple time windows. EURO Conference 2009, July 5 - 8, Bonn, Germany.
- 2008 F. Tricoire, K.F. Doerner, R.F. Hartl, M. Iori (2008), Heuristic, Exact and Hybrid Methods for the Multi-Pile Vehicle Routing Problem. Matheuristics workshop 2008, Bertinoro, Italy, June 16 - 18
- F. Tricoire, M. Romauch, K.F. Doerner, R.F. Hartl (2008), Algorithms for the Multi-Period Orienteering Problem with Multiple Time Windows. EU/MEeting 2008 - Troyes, France, October 23-24, 2008
- 2007 F. Tricoire, K.F. Doerner, R.F. Hartl, M. Iori (2007), Variable Neighbourhood Search for the Multi-Pile Vehicle Routing Problem. MIC 2007, Montreal, Canada, June 2007
- 2006 F. Tricoire, N. Bostel, P. Dejax, P. Guez (2006), A Branch-and-Price approach for the multiperiod service routing problem with time windows, Odysseus, Altea, Spain, May 23-26
- 2005 F. Tricoire, N. Bostel, P. Dejax, P. Guez (2005), An Evolutionary Metaheuristic for the Fixed fleet, Multiperiod, Vehicle Routing Problem with Time Windows, MIC 2005, Vienna, Austria, August

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## Other contributions to research

- Advisory activity
- Co-advising the PhD thesis of Andreas Krawinler on consistent and region-dependent routing (University of Vienna)
  - Co-advising the PhD thesis of Biljana Roljic on intra-facility heavy-duty logistics (University of Vienna)
  - Co-advising the PhD thesis of David Wolfinger on multimodal transportation for large scale full truckload logistics (University of Vienna)
  - Co-advising the PhD thesis of Thibaut Barthélémy on multi-objective hybrid optimisation methods (University of Vienna)
  - Co-advised the PhD thesis of Stefanie Kritzingner on self-tuning metaheuristics (Johannes Kepler University, Linz)
- Fund raising
- Co-applicant and part leader for the academic exchange research project “Periodic and dial-a-ride transportation of elderly and disabled persons” from the Austrian Academic Exchange Service (ÖAD project #FR 03/2009); budget: 5760 €

	Co-applicant and part leader for the HybridMOOP project from the Austrian Science Fund (FWF project #P23589); budget: 297,000 €
Applied research	Senior researcher on the development of a decision-making optimisation software for a major Austrian tyre retailer; multi-period prize-collecting routing problem with specific constraints.  Part leader and co-supervisor of PhD students for the optimisation of the delivery routes of the #1 Austrian mail delivery company; large scale multi-modal routing problem.
Peer reviewing	Reviewed articles for top journals in operations research including Operations Research, Transportation Science, Networks, INFORMS Journal on Computing, European Journal of Operational Research, Computers & Operations Research
Event organisation	Co-organisation of the EU/ME workshop on client-centered logistics and international aid, February 21-22 2011, Vienna, Austria

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## Teaching

Introduction to metaheuristics	University of Vienna, 2008, 2009, 2013, 2016; complexity and NP-Hard problems, presentation of various metaheuristics, design and analysis of metaheuristics.
Application of metaheuristics	University of Vienna, 2010, 2014; development, implementation and analysis of metaheuristics for optimisation problems.
Production Analysis	University of Vienna, 2015; introduction to production analysis and optimisation.
Metaheuristics	École des Mines de Nantes, 2013, 2015a, 2015b, 2016; introduction to metaheuristics and application to toy problems.
Linear Programming	University of Vienna, 2013; analysis, modelisation and implementation (using XPress-MP).
Paper reading	University of Vienna, 2008–2009; Knowledge extraction and bibliography.
LP for production management	University of Vienna, 2008; modelization of production problems as linear programs, implementation using commercial software (XPress-MP).
Introduction to Operations Research	École des Mines de Nantes, 2006; polynomial algorithms for OR problems; heuristics and metaheuristics.
Industrial and logistics systems	École des Mines de Nantes, 2003-2006; introduction to logistics, production and supply chain; basic heuristic approaches.
Databases	École des Mines de Nantes, 2003; relational databases, php and web interfaces.
Functional programming	Université de Nice, 2002; functional programming with the Scheme programming language.
Advanced algorithmics	Université de Nice, 2002; algorithmics for computer science students.

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## References

Philip Kilby	Senior Researcher at NICTA for the Intelligent Fleet Logistics project and at the Australian National University, Canberra, Australia (Philip.Kilby@data61.csiro.au)
Nathalie Bostel	PhD advisor, Professor at Université de Nantes, France (nathalie.bostel@univ-nantes.fr)
Karl F. Doerner	Current supervisor and head of the chair of Production and Operations Management with International Focus of the University of Vienna, Austria (karl.doerner@univie.ac.at)

Richard F. Hartl Former supervisor, head of the chair of Production and Operations Management at the University of Vienna, Austria (richard.hartl@univie.ac.at)