

Christiane Barz

Mathematics for Business and Economics
Department of Business Administration
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Education

- 2004 – 2006 *Karlsruhe Institute of Technology, Germany,*
Graduate School of Information Management and Market Engineering
Doctorate Degree (Dr. rer. pol. – with honors)
- 2001 – 2002 *Universitat de Barcelona, Spain*
Sokrates Scholar at the Department of Economics
- 1998 – 2004 *Karlsruhe Institute of Technology, Germany*
School of Economics and Business Engineering
Diploma in Industrial Engineering (Dipl. Wi.-Ing. – with honors)

Academic Positions

- 2016 – today *University of Zurich, Switzerland*
Full Professor, Mathematics for Business and Economics
- 2015 – 2016 *Technical University of Berlin, Germany*
Full Professor, Operations and Production Management
- 2009 – 2016 *University of California at Los Angeles, California*
Assistant Professor (tenure track) at the Anderson School of Management
- 2013 *Karlsruhe Institute of Technology, Germany*
Visiting Professor at the Karlsruhe Service Research Institute
- 2007 – 2009 *University of Chicago, Illinois*
Postdoctoral researcher working in the Operations Management Group of the Booth School of Business
- 2006 – 2007 *Karlsruhe Institute of Technology, Germany*
Postdoctoral researcher working under Prof. Dr. Waldmann at the Institute for Economic Theory and Operations Research

Awards and Distinctions

- 2020 Teacher of the Hour 2020 for outstanding teaching when transitioning to online teaching due to Corona
- 2020 Teaching Award “Goldener Schwamm” for outstanding teaching to first year Bachelor students
- 2016 Hector Teaching Award of the Hector School of Engineering and Management, Karlsruhe Institute of Technology, Germany
- 2015 Global Executive MBA for Asia Pacific Teaching Excellence Award at the UCLA Anderson School of Management
- 2012 George Robbins Assistant Professor Teaching Award at the UCLA Anderson School of Management
- 2010 Hector Teaching Award 2008/2009 of the Hector School of Engineering and Management, Karlsruhe Institute of Technology, Germany
- 2008 and 2009 Exceptional Service award in the Executive MBA Program of the Booth School of Business, University of Chicago

2007	GOR Dissertation Award for outstanding thesis awarded by the German society for operations research
2007	Erna-Scheffler Award for outstanding academic achievement by a female researcher
2006	Best Paper Award of the Graduate School of Information Management and Market Engineering 2006
2005	Faculty Award (Fakultätspreis), School of Economics and Business Engineering, Karlsruhe Institute of Technology, for best diploma thesis
2002	Jubiläumsstaatsstiftung Award for outstanding Bachelor degree (Vordiplom)

Working Papers and Work in Progress

- Nonlinear Approximations in Network Revenue Management. Submitted, with D. Adelman and A. Nadal.
- Physician Scheduling with Stochastic Absences. Work in Progress, with S.M. Hosseini and J. Turner.
- Reductions of Non-Separable Approximate Linear Programs for Network Revenue Management. Submitted, with S. Laumer.
- Risk-Sensitive Network Revenue Management. Submitted, with M. Glanzer.
- Textbook project, accepted at Springer: Mathematik für Wirtschaftswissenschaftler - Eine präzise und anwendungsorientierte Einführung

Publications

Peer Reviewed Journal Publications:

- Barz, C., S. Laumer, M. Freyschmidt and J. Martinez-Blanco (2021): Discrete dynamic pricing and application of network revenue management for FlixBus. *Journal of Revenue and Pricing Management*, <https://doi.org/10.1057/s41272-021-00365-4>.
- Barz, C. and D. Gartner (2016): Network Air Cargo Revenue Management. *Transportation Science*, Vol. 50 (4), pp 1206-1222.
- Barz, C. and K. Rajaram (2015). Elective Patient Admission and Scheduling under Barz, C. Multiple Resource Constraints. *Production and Operations Management*, Vol. 24 (12), pp. 1907-1930.
- Adelman, D. and C. Barz (2014). A Price-Directed Heuristic for the Economic Lot Scheduling Problem. *IIE Transactions*, Vol. 46, pp. 1343-1356.
- Adelman, D. and C. Barz (2014). A Unifying Approximate Dynamic Programming Model for the Economic Lot Scheduling Problem. *Mathematics of Operations Research*, Vol. 39 (2), pp. 374-402.
- Barz, C. and R. Kolisch (2014). Hierarchical Multi-Skill Resource Assignment in the Telecommunications Industry. *Production and Operations Management*, Vol. 23 (3), pp. 489-503.
- Duda, C., K. Rajaram, C. Barz and T. Rosenthal (2013). A Framework for Improving Access and Customer Service Times in Health Care: Application and Analysis at the UCLA Medical Center. *The Health Care Manager*, Vol. 32(3), pp. 212-26.
- Barz, C. and A. Müller (2012). Comparison and Bounds for Functions of Future Lifetimes Consistent with Mortality Tables. *Insurance: Mathematics and Economics*, Vol. 50, pp. 229-235.
- Barz, C. and A. Müller (2012). A Tilting Algorithm for the Estimation of Fractional Age Survival Probabilities. *Lifetime Data Analysis*, Vol. 18, pp. 234-246, 2012, with A. Müller.

- Barz, C. and K.-H. Waldmann (2007) Risk-Sensitive Capacity Control in Revenue Management" *Mathematical Methods of Operations Research*, Vol. 65, pp. 565-579.

Monograph:

- Barz, C. (2007). *Risk-Averse Capacity Control in Revenue Management*. Lecture Notes in Economics and Mathematical Systems, Vol. 597, Springer, 2007 (p.173).

Other Publications:

- Barz C. and N. Branger (2022). Risk-sensitive Markov Decision Processes. Pardalos, P.M. and O.A. Prokopyev (eds) Encyclopedia of Optimization. Forthcoming.
- Barz C. and M. Glanzer (2022). Approximate Dynamic Programming: Linear Programming-Based Approaches. Pardalos, P.M. and O.A. Prokopyev (eds) Encyclopedia of Optimization. Forthcoming.
- Barz, C. (2008). Expected Additive Time-Separable Utility Maximizing Capacity Control in Revenue Management. Kalcsics, J. and Nickel, S.(eds): Operations Research Proceedings 2007, pp. 3-8.
- Barz, C. (2008). Risikoaverse Kapazitätssteuerung im Revenue Management. OR News, Vol.33, pp. 23-25.
- Barz, C. and K.H. Waldmann (2007). Risk-Sensitive Decision Support for Admission Control. Köppen, V. and Müller, R. M. (eds), Business Intelligence: Methods and Applications, pp.165-174, Dr. Kovac Verlag.
- Barz, C. (2006). How does Risk Aversion Affect Optimal Revenue Management Policies? – A Simulation Study. Mattfeld, D. and Suhl, L. (eds), DSOR Contributions to Information Systems (Proceedings of the Mulikonferenz Wirtschaftsinformatik), Vol. 3, pp. 161-172.
- Barz, C. and K.H. Waldmann (2006). An Application of Markov Decision Processes to the Seat Inventory Control Problem. Morlock, M., Schwindt, C., Trautmann, N., and Zimmermann, J.(eds), Perspectives on Operations Research, pp. 113-128.
- Barz, C., M. Uhrig-Homburg and K.-H. Waldmann (2006). Yield Management: Beyond Expected Revenue. Dreier, T., Studer, R., and Weinhardt, C. (eds), Information Management and Market Engineering, pp. 71-84.
- Schepperle, H., C. Barz, K. Böhm, J. Kunze, C. M. Laborde, S. Seifert, and K. Stockmar(2006). Auction Mechanisms for Traffic Management. Seifert, S. and Weinhardt, C. (eds), Group Decision and Negotiation Proceedings, pp. 214–217.
- Branke, J., C. Barz and I. Behrens (2003). Ant-Based Crossover for Permutation Problems. Cantu-Paz, E. (eds), Genetic and Evolutionary Computation Conference, Lecture Notes In Computer Science 2273, pp. 754-765.

Presentations

- On "Risk-sensitive Network Revenue Management"
 - Invited talk at the Tuck Operations and Management Science Workshop, Hanover, New Hampshire, October 2022
- On "Nonlinear Approximations in Network Revenue Management"
 - Conference presentation at the INFORMS Revenue Management and Pricing Conference, New York, June 2015
 - Conference presentation at the IFORS 2014 conference, Barcelona, Spain, July 2014
 - Conference presentation at the Euro 2013 conference, Rome, Italy, July 2013
- On "Patient Admissions under Multiple Resource Constraints"
 - Invited talk at the International INFORMS conference in Waikoloa Village, Hawaii, June 2016
 - Invited talk at the GOR Meeting on Pricing and Revenue Management in Munich, January 2016
 - Invited talk at the RWTH Aachen, November 2013
 - Conference presentation at INFORMS Revenue Management and Pricing Conference, Atlanta, Georgia, June 2013

- Conference presentation at POMS Meeting, Denver, Colorado, May 2013
- Conference presentation at INFORMS, Phoenix, Arizona, October 2012
- Invited talk at the Karlsruhe Institute of Technology, Germany, July 2012
- Invited talk at the London Business School, England, July 2012
- Invited talk at the University of Siegen, Germany, June 2012
- Invited talk at the Technical University of Munich, Germany, June 2012
- Invited talk at the University of Warwick, England, May 2012
- Conference presentation at IFORS, Melbourne, Australia, July 2011
- On “An Introduction to Approximate Dynamic Programming”
 - Invited talk at the KSRI Speaker Series, Karlsruhe, October 2013
- On “An ADP Model for the resource assignment of hierarchical multi-skill jobs in the telecommunication industry”
 - Conference Presentation at OR 2011, Zurich, September 2011
 - Presentation at the Southern California OR/OM Day, Los Angeles, California, May 2011
- On “An Approximate Dynamic Programming Policy to the Sequence Dependent ELSP”
 - Invited talk at the Eindhoven University of Technology, the Netherlands, October 2013
 - Invited talk at the University of Aarhus, Denmark, May 2012
 - Conference presentation at the INFORMS Computing Society Conference, Monterey, California, January 2011
 - Conference presentation at OR 2010, Munich, Germany, September 2010
 - Invited talk at the Karlsruhe Institute of Technology, Germany, March 2009
- On “An Approximate Dynamic Programming Approach to the Sequence Dependent ELSP”
 - Invited talk at Tepper School of Business Operations Workshop, Carnegie Mellon University, Pennsylvania, September 2009
 - Conference presentation at MSOM 2009 Conference, Boston, Massachusetts, July 2009
 - Conference presentation at the Euro Conference, Bonn, Germany, July 2009
 - Invited talk at the Operations Seminar, Kellogg School of Management, Northwestern University, Illinois, February 2009
 - Invited talk at the DOTM Seminar Series, UCLA, California, February 2009
 - Invited talk at the OPIM Seminar, The Wharton School, University of Pennsylvania, Pennsylvania, February 2009
 - Invited talk at the Operations Research Seminar, Cornell School of ORIE, Cornell University, Ithaca, New York, February 2009
 - Invited talk at the Operations Workshop, Johnson Graduate School of Management, Cornell University, Ithaca, New York, January 2009
 - Invited talk at the Operations Seminar, Ivey School of Business, University of Western Ontario, London, Canada, January 2009
 - Conference presentation at INFORMS, Washington D.C., USA, October 2008
- On “Risk-Sensitive Dynamic Pricing in Revenue Management”
 - Conference presentation at the European Conference on Operational Research, Prague, Czech Republic, June 2007
- On “Risk-Sensitive Capacity Control in Revenue Management”
 - Invited talk at the Colleges of Claremont, March 2012
 - Invited talk at the Center for Applied Statistics, UCLA, February 2012
 - Invited talk at Graduate School of Information Management and Market Engineering, Karlsruhe, Germany, February 2008
 - Conference presentation at the German Operations Research Conference, Saarbrücken, Germany, September 2007
 - Invited talk at the Erna Scheffler Award Ceremony, Karlsruhe, Germany, July 2007
 - Conference presentation at the INFORMS Revenue Management and Pricing Section Conference, Barcelona, Spain, June 2007
 - Conference presentation at the German Operations Research Conference, Karlsruhe, Germany, September 2006
 - Workshop presentation at the EURO Working Group on Stochastic Modeling Meeting, Amsterdam, The Netherlands, April 2006
 - Conference presentation at the Multikonferenz Wirtschaftsinformatik 2006, Passau, Germany, February 2006

- Invited talk at the Revenue Management and Dynamic Pricing Working Group Meeting at Lufthansa Systems, Berlin, Germany, February 2006
- “How Does a Computer Throw a Die? Using Simulation to Optimize Complex Systems in Economics and Engineering.”
 - Interactive workshop for high school students interested in studying at the Karlsruhe Institute of Technology, Germany, November 2006

Teaching Experience

- Lecturer for “Service, Operations and Logistics for Industry 4.0” in the Program Executive MBA Program of UZH since 2019
- Lecturer for “Introduction to Operations Research: Stochastic Models” in the Master Program of the Faculty for Business, Economics, and Informatics at University of Zürich, since 2016
- Lecturer for “Mathematics I and II” in the Bachelor Program of the Faculty for Business, Economics, and Informatics at University of Zürich, since 2016
- Lecturer for “Statistics for Management Decisions” in the MSOL Program at UCLA, Summer 2016
- Lecturer for “Production Management” in the Bachelor program at TU Berlin, Summer and Fall 2015
- Lecturer for “Stochastic Models in Operations Management” in the Bachelor and Master program at TU Berlin, Fall 2015
- Lecturer for “Optimization Methods in Service Management” in the Bachelor and Master program at TU Berlin, Summer and Fall 2015
- Organization of the “Operations Management Colloquium” in the Graduate program at TU Berlin, Summer and Fall 2015
- Lecturer for “Model Building in Operations Management” for the MSc program in logistics at the Haus der Technik, Aachen, Germany, scheduled for July 2014
- Lecturer for “Data Analysis and Management Decisions” in the Global Executive MBA Program for the Americas, Anderson School of Management, UCLA, 2012-today
- Organization of the Ph.D. Seminar in Decisions, Operations, and Technology Management, Anderson School of Management, UCLA, 2010- today
- Lecturer for “Applied Stochastic Processes” in the PhD program Anderson School of Management, UCLA, 2011
- Lecturer for “Data and Decisions” in the full time MBA program, Anderson School of Management, UCLA, 2009- today
- Lecturer for “Simulation and Case Studies” in the international MSc and MBA module Stochastics and Games, Hector School of Engineering and Management, Karlsruhe, 2006, 2009, 2012, 2014
- Teaching Assistant for “Operations Management” in the weekend and executive MBA program and for “Managerial Spreadsheet Modeling” in the evening MBA program, Booth School of Business, University of Chicago, 2008
- Teaching Assistant positions for classes in Operations Research, Simulation, Stochastic Dynamic Programming, Quality Control, OR Methods in Revenue Management, Statistics, Econometrics, Algorithms for Internet Applications and Java-Programming at the School of Economics and Business Engineering, Karlsruhe Institute of Technology, 1999-2007

Editorial Work

- Associate Editor for OR Spectrum since 2015
- Associate Editor for Mathematical Methods of Operations Research since 2015
- Associate Editor for the Journal of Revenue & Pricing Management 2014-2015
- Reviewer for Operations Research, Management Science, Mathematics of Operations Research, Manufacturing and Service Operations Management, Production and Operations Management, Computers and Operations Research, Transportations Science, the European Journal of Operational Research, IIE Transactions, Journal of Revenue and Pricing Management, Mathematical Methods of Operations Research, Communications in Statistics – Theory and Methods, International Journal of Production Economics, Journal of Business Economics

Other Professional Service

- Deputy Director of the Department of Business Administration, University of Zurich, since 2021
- Selection Committee Member of UZH Doc Mobility Grants since 2021
- Selection Committee Member of FAN Fellowship since 2019
- Board Member of the EURO Working Group for Pricing and Revenue Management since 2018
- Advisor Career Elixier at UZH since 2022
- Selection Committee Member of SNF Doc Mobility and Early Postdoc Mobility Grants 2019-2021
- Member of the Legislative Assembly of the Academic Senate and the UC Assembly of the Academic Senate 2013-2015, faculty advisor of the Women's Business Connection (WBC) 2013-2015
- Review panelist for the National Science Foundation (NSF), 2013

Miscellaneous

- Member of INFORMS and GOR
- Faculty advisor for scholars of the "Studienstiftung des deutschen Volkes" 2016-2017
- Grants: Exist 2016, Easton Research Grant 2014, Easton Research Grant 2011, Travel Grants 2010, 2011, 2013
- "Baden-Württemberg-Zertifikat für Hochschuldidaktik" (Completion of an accredited training on the development of teaching skills comprising 200 hours) 2008
- Scholarship of the German National Academic Foundation (Studienstiftung des Deutschen Volkes) 2001-2004
- Languages: Fluent in English and German (native), working knowledge of Spanish