

University Academic Curriculum Vitae

Personal information

Carola Schrage
 Place and –date of birth: Wuppertal, 26.08.1978
 Nationality: German
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Education since leaving school

- 2005 Diploma (Master) in Mathematics; Martin Luther University of Halle, Wittenberg
- 2009, PhD in Mathematics, Thesis title “Set Valued Analysis”; Martin Luther University of Halle, Wittenberg

Present appointment

- Title of appointment: Junior University Researcher, RTD
- start of appointment: 9.2014
- Level of appointment: Assistant Professor
- Employer: Faculty of Economics and Management, Free University of Bozen, Bolzano
- responsibilities: Research and 60-120 hours of teaching

Professional experience

From / to	Job title	Name of academic Institution	Academic level	responsibilities
11.2013-9.2014	Research Fellow	Department of Economics and Political Sciences, Università della Valle d'Aosta	Post Doc	Research
12.2012	Contract Professor	Department of Economics and Political Sciences, Università della Valle d'Aosta	Lecturer	30 hours lecture
12.2011	Contract Professor	Department of Economics and Political Sciences, Università della Valle d'Aosta	Lecturer	30 hours lecture
4.2011-9.2011	Contract Professor	Faculty of Natural Sciences II, Martin Luther University Halle, Wittenberg	Lecturer	3 Exercise classes, student supervision
10.2010-3.2011	Contract Professor	Faculty of Transportation, Technical University Dresden	Lecturer	1 Lecture, Student supervision

Visiting Positions

From / to	Name of academic Institution
4.2013-5.2013	Dipartimento di Economia, Università degli Studi dell'Insubria, Varese
11.2012	Institute of Mathematical Sciences, University of Yeshiva
2.2010-9.2010	Institute of Mathematics, Faculty of Natural Science II, Martin-Luther-University Halle-Wittenberg
9.2009-2.2010	Department of Mathematics, Universitat Autònoma de Barcelona
6.2009-8.2009	Department of Operations Research and Financial Engineering, Princeton University
6.2008-8.2008	Department of Operations Research and Financial Engineering, Princeton University

Experience in academic teaching over the last five years

- 2015/16, 2016/17: Lecture and Exercises; M1 Mathematics for PPE, undergraduate course at the Faculty of Economics and Management, Free University of Bozen, Bolzano
- 2014/15, 2015/16, 2016/17: Preparatory Course Mathematics for Economics, undergraduate course at the Faculty of Economics and Management, Free University of Bozen, Bolzano
- 2014/15: Exercises; M1 and M2 Mathematics for PPE, undergraduate course at the Faculty of Economics and Management, Free University of Bozen, Bolzano
- 2012/13: Lecture; Multivariable Optimization, undergraduate course at the Department of Economics and Political Sciences, Università della Valle d'Aosta
- 2011/12: Lecture; Vector Optimization, a Generalized Approach, undergraduate course at the Department of Economics and Political Sciences, Università della Valle d'Aosta

Other academic responsibilities

- Since 2.2016: Representative of Assistant Professors for the faculty council at the Faculty of Economics and Management, Free University of Bozen, Bolzano
- 3.2017: Organizer of the workshop: Poker Strategies and Decision Making at the Free University of Bozen, Bolzano (one day)
- 9.2016: Co-organizer of the conference Set Optimization Meets Finance 3, Vienna University of Economics and Business (one week)
- 9.2014: Co-organizer of the conference Set Optimization Meets Finance 2, Free University of Bozen, Bolzano (one week)

- 8.2012: Co-organizer of the conference Set Optimization Meets Finance, Martin Luther University of Halle-Wittenberg (one week)
- Referee for: Journal of Global Optimization, Journal of Optimization Theory and Applications, Optimization Letters, Optimization, Mathematical Reviews, Annals of Operations Research, Set-Valued and Variational Analysis

Research Interests

Convex and variational analysis, in particular for vector- and set-valued functions;
 Optimization theory, in particular optimality conditions and duality for problems with set-valued objectives;
 Scalarization methods in set optimization;
 Ordered algebraic structures like lattice ordered residuated monoids as fundamentals for set-valued variational analysis;
 Application of the above to set-valued risk measures for markets with transaction costs

Scholarships and Research grants

Date granted	Award Holder(s)	Funding Body	Title	Amount received
2016	C.Schrage	Free University of Bozen, Bolzano	Set Optimization via Abstract Convexity	10000 Euro
2015	E. Foscolo	Free University of Bozen, Bolzano	Financial Crisis Chronicles: Systemic Perspective and Econometric Issues	8700 Euro
2005	C. Schrage	Federal State of Sachsen-Anhalt	PhD Grant	19200 Euro

Publications

Books – Edited

- Set Optimization and Applications - The State of the Art, Hamel, Heyde, Loehne, Rudloff and Schrage (eds)Springer-Verlag, Proceedings in Mathematics and Statistics 151, 2015
 DOI: 10.1007/978-3-662-48670-2

Chapters in books

- (*) Set optimization - A rather short introduction with A.H. Hamel, F. Heyde, A. Löhne and B. Rudloff, in Set Optimization and Applications - The State of Art, Hamel, Heyde, Loehne, Rudloff, Schrage (eds), 65–141, 2014
 DOI: 10:1007/978-3-662-48670-2_3

- Set optimization meets variational inequalities with G.P. Crespi, in Set Optimization and Applications - The State of Art, Hamel, Heyde, Löhne, Rudloff, Schrage (eds), 213–247, 2014
DOI: 10.1007/978-3-662-48670-2_7

Journal Papers in refereed academic journals

- Weak minimizers, minimizers and variational inequalities for set-valued functions. A blooming wreath? with G.P. Crespi, Optimization, published online 2016
Impact Factor: 0.822
DOI:10.1080/02331934.2016.1189550
- (*) A Minty variational principle for set optimization with A.H. Hamel and G.P. Crespi, Journal of Mathematical Analysis and Applications, 423 (1) 770–796, 2015
Impact Factor: 1.130
DOI 10.1016/j.jmaa.2014.10.010
- (*) Scalar representation and conjugation of set-valued functions, Optimization, 64 (2) 197–223, 2015
Impact Factor: 0.822
DOI:10.1080/02331934.2012.741126
- Note: An algorithm to solve polyhedral convex set optimization problems with A. Löhne, Optimization, 64(9) 2039–2041, 2015
Impact Factor: 0.822
DOI:10.1080/02331934.2014.985680
- Variational inequalities characterizing weak minimality in set optimization with G.P. Crespi and M. Rocca, Journal of Optimization Theory and Applications, 166(3), 804–824, 2014
Impact Factor: 1.384
DOI 10.1007/s10957-014-0679-3
- (*) Directional derivatives and subdifferentials of set-valued convex functions with A.H. Hamel, Pacific Journal of Optimization, 10(4) 667–689, 2014
Impact Factor: 0.400
- An algorithm to solve polyhedral convex set optimization problems with A. Löhne, Optimization, 62 (1), 131–141, 2013
Impact Factor: 0.822
DOI:10.1080/02331934.2012.749259
- (*) Continuity concepts of set-valued functions and a fundamental duality formula for set-valued optimization with F. Heyde, Journal of Mathematical Analysis and Applications, 397 (2) 772–784, 2013
Impact Factor 1.130
DOI:10.1016/j.jmaa.2012.08.019
- (*) Notes about extended real- and set-valued functions with A.H. Hamel, Journal of Convex Analysis, 2 (19) 355–384, 2012
Impact Factor: 0.786

Other publications

- Set-Valued Convex Analysis Ph.D. thesis, Martin-Luther-University Halle-Wittenberg, 2009

**Presentations
at scientific
conferences
over past 3
years**

- SOFA 3, Vienna, September 2016: "Solution Concepts in Set Optimization"
- ICCOPT, Tokyo, August 2016: "Set-Valued Variational Inequalities in Vector Optimization"
- NAO Asia 2016, Niigata, August 2016: "Approximate Solutions in Set Optimization"
- SigOpt, Trier, April 2016: "Set-Valued Variational Inequalities in Vector Optimization"
- Euro, European conference on Operational Research, Glasgow, July 2015: "Solution concepts generated by families of scalar functions"
- Workshop on Set Optimization Bozen, March 2015: "Set Relations via Scalar Families and Approximate Solutions in Set Optimization"
- SOFA 2, Brunico, September 2014: "A Weierstrass Extreme Value Theorem in Set Optimization"
- EuroOPT 2014, Perpignan July, 2014: "Variational Inequalities in Set Optimization"
- 6th German Polish Conference on Optimization, Wittenberg, March 2014: "Set Optimization meets Variational Inequalities"

**Language
competence**

- German: Native speaker
- English: C2
- Spanish: B1
- Italian: A2
- Japanese: A2
- Russian: A1

Date

Signature

