

# Sven Seuken

Last updated: March 26, 2019

Department of Informatics  
University of Zurich  
Binzmühlestrasse 14  
CH-8050 Zurich, Switzerland

Office: BIN-2.B.02  
Phone: +41 44 635 67 48  
Email: [seuken@ifi.uzh.ch](mailto:seuken@ifi.uzh.ch)  
Web: <http://ifi.uzh.ch/ce>

## Research Fields

- Market Design, Algorithmic Game Theory, Artificial Intelligence, Machine Learning

## Principal Academic Appointments

- **Associate Professor (with Tenure) of Computation and Economics**, since 09/2017  
University of Zurich, Department of Informatics
- **Assistant Professor (Tenure-Track) of Computation and Economics**, 09/2011 – 08/2017  
University of Zurich, Department of Informatics  
Founder and Head of the Computation and Economics Research Group

## Short-term Appointments

- **Visiting Associate Professor**, 09/2018 – 12/2018  
Stanford University, Palo Alto, CA – hosted by Alvin E. Roth
- **Postdoctoral Researcher**, 06/2011 – 08/2011  
Harvard University, Cambridge, MA
- **Research Intern**, 06/2009 – 09/2009, 07/2010 – 10/2010  
Microsoft Research, Redmond, WA, USA
- **Research Intern**, 07/2008 – 11/2008  
Microsoft Live Labs, Bellevue, WA, USA
- **Associate Intern**, 07/2006 – 09/2006  
McKinsey & Company, Frankfurt, Germany

## Education

- **Harvard University, Cambridge, MA** 09/2006 – 05/2011  
Ph.D. in Computer Science, May 26, 2011  
M.S. in Computer Science, June 5, 2008  
Ph.D. Thesis: *Hidden Markets: Designing Efficient but Usable Market-based Systems*  
Dissertation Committee: David C. Parkes (chair), Alvin E. Roth, Yiling Chen, Eric Horvitz
- **University of Massachusetts, Amherst, MA** 09/2004 – 05/2006  
M.S. in Computer Science, May 27, 2006  
Advisor: Shlomo Zilberstein
- **University of Freiburg, Germany** 10/2001 – 08/2004  
Vordiplom (Intermediate Exam) in Computer Science, August 2003

## Honors and Awards

2018	ERC Starting Grant (also listed under grants)
2017	Among the “Top-40 under 40”, selected by the German business magazine “Capital”
2016	Invited to give an <i>Early Career Spotlight Talk</i> at the International Joint Conference on Artificial Intelligence (IJCAI’16)
2016	Outstanding Senior Program Committee Member Award, IJCAI’16
2013	Google Faculty Research Award (also listed under grants)
2009 – 2011	Microsoft Research Ph.D. Fellowship
2008	Harvard Teaching Award: Certificate of Distinction in Teaching
2007 – 2008	Herbert S. Winokur, Jr. Fellowship in Decision Sciences (awarded via Harvard)
2006 – 2007	Harvard University Fellowship
2006 – 2011	McKinsey & Company College Fellowship
2004 – 2005	Fulbright Fellowship
2004 – 2005	DAAD Fellowship (declined)
2002 – 2006	Fellowship from the German National Merit Foundation (Studienstiftung des deutschen Volkes)
2003 – 2005	Fellowship from e-fellows.net, awarded by the University of Freiburg for outstanding academic achievement
2000	Valedictorian (best high school diploma), Konrad-Adenauer Gymnasium Kleve

## Research Grants

2018 – 2023	Principal Investigator (PI); ERC Starting Grant for the project <i>Machine Learning-based Market Design</i> ; starting date: 1.12.2018; duration: 5 years; amount: <b>€1,375,000</b> .
2015 – 2018	PI; Microsoft Research grant for the project <i>Preference Elicitation and Mechanism Design for Complex Dynamic Systems</i> (UK Microsoft Research PhD Scholarship Programme); starting date: 1.10.2015; duration: 3 years; amount: <b>€103,150</b> .
2015 – 2018	Co-PI; European Union (EU) Horizon 2020 research grant for the project <i>Distributed Global Financial Systems for Society</i> ; starting date: 1.3.2015; duration: 3 years; my portion of the grant (approximate): <b>CHF 220,000</b> .
2015 – 2018	PI; Swiss National Science Foundation (SNSF) research grant for the project <i>Trading off Strategyproofness and Efficiency in Matching Markets</i> ; starting date: 1.1.2015; duration: 3 years; amount: <b>CHF 281,436</b> .
2014 – 2018	Co-PI; Swiss National Science Foundation (SNSF) research grant for the project <i>A Market-based Approach for Querying the Web of Data</i> ; starting date: 1.9.2014; duration: 4 years; my portion of the grant: <b>CHF 224,214</b> .
2013 – 2016	PI; Swiss National Science Foundation (SNSF) research grant for the project <i>Foundations of Market User Interface Design and Applications to the Smart Grid</i> ; starting date: 1.4.2013; duration: 3 years; amount: <b>CHF 179,600</b> .
2013	PI; Google Faculty Research Award for the project <i>Human Recommender Systems</i> ; starting date: 1.8.2013; duration: unrestricted; amount: <b>\$76,000</b>
2012 – 2013	PI; Hasler Foundation research grant for the project <i>Designing Matching Systems under Computational, Informational, and Behavioral Constraints</i> ; starting date: 1.10.2012; duration: 1 year; amount: <b>CHF 50,000</b> .

**Total amount of competitive third party money raised for my group (approx.): CHF 2,500,000**

# Publications & Working Papers

## Revise & Re-submit

1. **Partial Strategyproofness: Relaxing Strategyproofness for the Random Assignment Problem.** Timo Mennle and **Sven Seuken**. Working Paper. Revision requested from the *Journal of Economic Theory (JET)*. September, 2018.[\(PDF\)](#)

## Publications (peer-reviewed)

1. **Default Ambiguity: Credit Default Swaps Create New Systemic Risks in Financial Networks.** Steffen Schuldenzucker, **Sven Seuken**, and Stefano Battiston. *Management Science*. Forthcoming 2019.[\(PDF\)](#)
2. **Fast Iterative Combinatorial Auctions via Bayesian Learning.** Gianluca Brero, Sébastien Lahaie, and **Sven Seuken**. In *Proceedings of the 33rd AAAI Conference of Artificial Intelligence (AAAI-19)*, Honolulu, USA, January 2019.[\(PDF\)](#)
3. **Combinatorial Auctions via Machine Learning-based Preference Elicitation.** Gianluca Brero, Benjamin Lubin, and **Sven Seuken**. In *Proceedings of the 27th International Joint Conference on Artificial Intelligence and the 23rd European Conference on Artificial Intelligence (IJCAI-ECAI)*, Stockholm, Sweden, July 2018.[\(PDF\)](#) [\(Extended Version\)](#)
4. **Non-decreasing Payment Rules for Combinatorial Auctions.** Vitor Bosshard, Ye Wang, and **Sven Seuken**. In *Proceedings of the 27th International Joint Conference on Artificial Intelligence and the 23rd European Conference on Artificial Intelligence (IJCAI-ECAI)*, Stockholm, Sweden, July 2018.[\(PDF\)](#)
5. **Designing Core-selecting Payment Rules: A Computational Search Approach.** Benjamin Lubin, Benedikt Bünz, and **Sven Seuken**. Extended abstract in *Proceedings of the 18th ACM Conference on Economics and Computation (EC)*, Ithaca, NY, June 2018. Full paper:[\(SSRN\)](#)
6. **First-Choice Maximal and First-Choice Stable School Choice Mechanisms.** Umut Dur, Timo Mennle, and **Sven Seuken**. In *Proceedings of the 18th ACM Conference on Economics and Computation (EC)*, Ithaca, NY, June 2018.[\(PDF\)](#) [\(with appendix\)](#)
7. **Financing the Web of Data with Delayed-Answer Auctions.** Tobias Grubenmann, Abraham Bernstein, Dmitry Moor, and **Sven Seuken**. In *Proceedings of the 2018 WebConference (WWW)*, Lyon, France, April 2018.[\(PDF\)](#)
8. **Challenges of source selection in the WoD.** Tobias Grubenmann, Abraham Bernstein, Dmitry Moor, and **Sven Seuken**. In *Proceedings of the 16th International Semantic Web Conference (ISWC)*, Vienna, Austria, October 2017.[\(PDF\)](#)
9. **Decentralizing the Semantic Web: Who will pay to realize it?** Tobias Grubenmann, Daniele Dell'Aglio, Abraham Bernstein, Dmitry Moor, and **Sven Seuken**. In *Proceedings of the ISWC 2017 Workshop on Decentralizing the Semantic Web*, Vienna, Austria, October 2017.[\(PDF\)](#)
10. **Computing Bayes-Nash Equilibria in Combinatorial Auctions with Continuous Value and Action Spaces.** Vitor Bosshard, Benedikt Bünz, Benjamin Lubin, and **Sven Seuken**. In *Proceedings of the 26th International Joint Conference on Artificial Intelligence (IJCAI)*, Melbourne, Australia, August 2017.[\(PDF\)](#) [\(Github Repo\)](#)
11. **SATS: A Universal Spectrum Auction Test Suite.** Michael Weiss, Benjamin Lubin, and **Sven Seuken**. In *Proceedings of the 16th International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, São Paulo, Brazil, May 2017.[\(PDF\)](#) [\(SATS Webpage\)](#) [\(Github Repo\)](#)

12. **Save Money or Feel Cozy? A Field Experiment Evaluation of a Smart Thermostat that Learns Heating Preferences.** Mike Shann, Alper Alan, **Sven Seuken**, Enrico Costanza, and Sarvapali Ramchurn. In *Proceedings of the 16th International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, São Paulo, Brazil, May 2017.[\(PDF\)](#)
13. **Probably Approximately Efficient Combinatorial Auctions via Machine Learning.** Gianluca Brero, Benjamin Lubin, and **Sven Seuken**. In *Proceedings of the 31st Conference on Artificial Intelligence (AAAI)*, San Francisco, CA, February 2017.[\(PDF\)](#)
14. **Finding Clearing Payments in Financial Networks with Credit Default Swaps is PPAD-hard.** Steffen Schuldenzucker, **Sven Seuken**, and Stefano Battiston. In *Proceedings of the 8th Innovations in Theoretical Computer Science (ITCS) Conference*, Berkeley, USA, January 2017.[\(PDF\)](#) [\(Full Paper\)](#)
15. **The Pareto Frontier for Random Mechanisms.** Timo Mennle and **Sven Seuken**. Extended abstract in *Proceedings of the 17th ACM Conference on Economics and Computation (EC)*, Maastricht, The Netherlands, July 2016. Full paper:[\(PDF\)](#)
16. **Clearing Payments in Financial Networks with Credit Default Swaps.** Steffen Schuldenzucker, **Sven Seuken**, and Stefano Battiston. Extended abstract in *Proceedings of the 17th ACM Conference on Economics and Computation (EC)*, Maastricht, The Netherlands, July 2016. Full paper:[\(PDF\)](#)
17. **Core-Selecting Payment Rules for Combinatorial Auctions with Uncertain Availability of Goods.** Dmitry Moor, **Sven Seuken**, Tobias Grubenmann, and Abraham Bernstein. In *Proceedings of the 25th International Joint Conference on Artificial Intelligence (IJCAI)*, New York, NY, July 2016.[\(PDF\)](#)
18. **Personalized Hitting Time for Informative Trust Mechanisms Despite Sybils.** Brandon Liu, David C. Parkes, and **Sven Seuken**. In *Proceedings of the 15th International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, Singapore, May 2016.[\(PDF\)](#)
19. **It is too Hot: An In-Situ Study of Three Designs for Heating.** Alper T. Alan, Mike Shann, Enrico Costanza, Sarvapali D. Ramchurn, and **Sven Seuken**. In *Proceedings of the Conference on Human Factors in Computing Systems (CHI)*, San Jose, CA, May 2016.[\(PDF\)](#)
20. **New Core-Selecting Payment Rules with Better Fairness and Incentive Properties.** Benjamin Lubin, Benedikt Bünz, and **Sven Seuken**. Extended abstract in *Proceedings of the 3rd Conference on Auctions, Market Mechanisms and Their Applications (AMMA)*, Chicago, IL, August 2015. Working paper version:[\(PDF\)](#)
21. **A Double Auction for Querying the Web of Data.** Dmitry Moor, Tobias Grubenmann, **Sven Seuken**, and Abraham Bernstein. Extended abstract in *Proceedings of the 3rd Conference on Auctions, Market Mechanisms and Their Applications (AMMA)*, Chicago, IL, August 2015.[\(PDF\)](#)
22. **The Power of Local Manipulation Strategies in Assignment Mechanisms.** Timo Mennle, Michael Weiss, Basil Philipp, and **Sven Seuken**. In *Proceedings of the 23rd International Joint Conference on Artificial Intelligence (IJCAI)*, Buenos Aires, Argentina, July 2015.[\(PDF\)](#)
23. **A Faster Core Constraint Generation Algorithm for Combinatorial Auctions.** Benedikt Bünz, **Sven Seuken**, and Benjamin Lubin. In *Proceedings of the 29th Conference on Artificial Intelligence (AAAI)*, Austin, TX, January 2015.[\(PDF\)](#)
24. **An Axiomatic Approach to Characterizing and Relaxing Strategyproofness of One-sided Matching Mechanisms.** Timo Mennle and **Sven Seuken**. Extended abstract in *Proceedings of the 15th ACM Conference on Economics and Computation (EC)*, Stanford, CA, June 2014. Full paper:[\(PDF\)](#)
25. **Adaptive Home Heating under Weather and Price Uncertainty using GPs and MDPs.** Mike Shann and **Sven Seuken**. In *Proceedings of the 13th International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, Paris, France, May 2014.[\(PDF\)](#)

26. **Sybil-proof Accounting Mechanisms with Transitive Trust.** Sven Seuken and David C. Parkes. In *Proceedings of the 13th International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, Paris, France, May 2014.[\(PDF\)](#)
27. **An Active Learning Approach to Home Heating in the Smart Grid.** Mike Shann and Sven Seuken. In *Proceedings of the 23rd International Joint Conference on Artificial Intelligence (IJCAI)*, Beijing, China, August 2013.[\(PDF\)](#)
28. **Market User Interface Design.** Sven Seuken, David C. Parkes, Eric Horvitz, Kamal Jain, Mary Czerwinski, and Desney Tan. In *Proceedings of the 13th ACM Conference on Electronic Commerce (EC)*, Valencia, Spain, June 2012.[\(PDF\)](#)
29. **CrowdManager - Optimal Allocation and Pricing of Crowdsourcing Tasks with Time Constraints.** Patrick Minder, Sven Seuken, Abraham Bernstein, Mengia Zollinger. In *Proceedings of the Workshop on Social Computing and User Generated Content (SC)*, Valencia, Spain, June 2012.[\(PDF\)](#)
30. **Sharing in BitTorrent can be Rational.** Mike Ruberry and Sven Seuken. Extended Abstract in *Proceedings of the Second Conference on Auctions, Market Mechanisms and Their Applications (AMMA)*, New York, NY, August 2011.[\(PDF\)](#)
31. **Market User Interface Design.** Sven Seuken, David C. Parkes, Eric Horvitz, Kamal Jain, Mary Czerwinski, and Desney Tan. Extended Abstract in *Proceedings of the Second Conference on Auctions, Market Mechanisms and Their Applications (AMMA)*, New York, NY, August 2011. Working paper version:[\(PDF\)](#)
32. **Incentive-Compatible Escrow Mechanisms.** Jens Witkowski, Sven Seuken, and David C. Parkes. In *Proceedings of the Conference on Artificial Intelligence (AAAI)*, San Francisco, CA, August 2011.[\(PDF\)](#)
33. **On the Sybil-Proofness of Accounting Mechanisms.** Sven Seuken and David C. Parkes. In *Proceedings of the Workshop on the Economics of Networks, Systems, and Computation (NetEcon)*, San Jose, CA, June 2011.[\(PDF\)](#)
34. **Hidden Market Design (Challenge Paper).** Sven Seuken, Kamal Jain, and David C. Parkes. In *Proceedings of the Conference on Artificial Intelligence (AAAI)*, Atlanta, GA, July 2010.[\(PDF\)](#)
35. **Accounting Mechanisms for Distributed Work Systems.** Sven Seuken, Jie Tang, and David C. Parkes. In *Proceedings of the Conference on Artificial Intelligence (AAAI)*, Atlanta, GA, July 2010.[\(PDF\)](#)
36. **Market Design and Analysis for a P2P Backup System.** Sven Seuken, Denis Charles, Max Chickering, and Sidd Puri. In *Proceedings of the ACM Conference on Electronic Commerce (EC)*, Cambridge, MA, June 2010.[\(PDF\)](#)
37. **Hybrid Transitive Trust Mechanisms.** Jie Tang, Sven Seuken, and David C. Parkes. In *Proceedings of the International Conferences on Autonomous Agents and Multiagent Systems (AAMAS)*, Toronto, CA, May 2010.[\(PDF\)](#)
38. **Hidden Markets: UI Design for a P2P Backup Application.** Sven Seuken, Kamal Jain, Desney Tan, Mary Czerwinski. In *Proceedings of the Conference on Human Factors in Computing Systems (CHI)*, Atlanta, GA, April 2010.[\(PDF\)](#)
39. **Designing User Interfaces for Hidden Markets.** Sven Seuken, Denis Charles, Max Chickering, and Sidd Puri. In *Proceedings of the IJCAI Workshop on Intelligence and Interaction*, Pasadena, CA, July 2009.[\(PDF\)](#)
40. **Market Design and Analysis for a P2P Backup System.** Sven Seuken, Denis Charles, Max Chickering, and Sidd Puri. In *Proceedings of the Workshop on the Economics of Networks, Systems, and Computation (NetEcon)*, Stanford, CA, July 2009.[\(PDF\)](#)

41. **Market Design for a P2P Backup System.** Sven Seuken, Denis Charles, Max Chickering, and Sidd Puri. Extended abstract in *Proceedings of the 1st Conference on Auctions, Market Mechanisms and Applications (AMMA)*, Boston, MA, May 2009.(PDF)
42. **Handling Interdependent Values in an Auction Mechanism for Enhanced Bandwidth Allocation in Tactical Data Networks.** Mark Klein, David C. Parkes, Daniel Plakosh, Sven Seuken, and Kurt Wallnau. In *Proceedings of the Workshop on the Economics of Networks, Systems, and Computation (NetEcon)*, Seattle, WA, August 2008.(PDF)
43. **Partially-Synchronized DEC-MDPs in Dynamic Mechanism Design.** Sven Seuken, Ruggiero Cavallo, and David C. Parkes. In *Proceedings of the 23rd Conference on Artificial Intelligence (AAAI)*, Chicago, IL, July 2008.(PDF)
44. **Formal Models and Algorithms for Decentralized Decision Making Under Uncertainty.** Sven Seuken and Shlomo Zilberstein. In *Journal of Autonomous Agents and Multi-Agent Systems (JAAMAS)*, 17:2, pp. 190-250, 2008.(PDF)
45. **Improved Memory-Bounded Dynamic Programming for Decentralized POMDPs.** Sven Seuken and Shlomo Zilberstein. In *Proceedings of the 23rd Conference on Uncertainty in Artificial Intelligence (UAI)*, Vancouver, Canada, July 2007.(PDF)
46. **Memory-Bounded Dynamic Programming for DEC-POMDPs.** Sven Seuken and Shlomo Zilberstein. In *Proceedings of the 20th International Joint Conference on Artificial Intelligence (IJCAI)*, Hyderabad, India, January 2007.(PDF)
47. **EMIKA System: Architecture and Prototypic Realization.** Guenter Mueller, Torsten Eymann, Norbert Nopper, and Sven Seuken. In *Proceedings of the IEEE International Conference on Systems, Man and Cybernetics (SMC)*, The Hague, The Netherlands, October 2004.(PDF)

## Textbook

48. **Economics and Computation.** David C. Parkes and Sven Seuken. *Cambridge University Press*, (forthcoming).(www.economicsandcomputation.org)

## Working Papers

49. **Partial Strategyproofness: Relaxing Strategyproofness for the Random Assignment Problem.** Timo Mennle and Sven Seuken. Working Paper (under review). September, 2018.(PDF)
50. **Bayesian Admission Policies for Cloud Computing Clusters.** Ludwig Dierks, Ian Kash, and Sven Seuken. Working Paper. November 2018.(PDF)
51. **Computing Bayes-Nash Equilibria in Combinatorial Auctions with Verification.** Vitor Bosshard, Benedikt Bünz, Benjamin Lubin, and Sven Seuken. Working Paper. December 2018.(PDF) (Github Repo)
52. **Cloud Pricing: The Spot Market Strikes Back.** Ludwig Dierks and Sven Seuken. Working Paper. November 2018.(PDF)
53. **Machine Learning-powered Iterative Combinatorial Auctions.** Gianluca Brero, Benjamin Lubin, and Sven Seuken. Working Paper. October 2018.(PDF)
54. **Reinsurance: A Market for Risk.** Peter Cramton, Dirk Bergemann, Costantinos Daskalakis, Jakub Kastl, Alvin E. Roth, and Sven Seuken. Work in Progress. July 2018.
55. **Portfolio Compression: Positive and Negative Effects on Systemic Risk.** Steffen Schuldenzucker, Sven Seuken, and Stefano Battiston. Research Note. June 2018.(SSRN)
56. **The Computational Complexity of Clearing Financial Networks with Credit Default Swaps.** Steffen Schuldenzucker, Sven Seuken, and Stefano Battiston. Working Paper. November 2017.(PDF)
57. **Trade-offs in School Choice: Comparing Deferred Acceptance, the Naïve and the Adaptive Boston Mechanism.** Timo Mennle and Sven Seuken. July 2017.(PDF)



58. **Hybrid Mechanisms: Trading Off Strategyproofness and Efficiency of Random Assignment Mechanisms.** Timo Mennle and **Sven Seuken**. July 2017.(PDF)
59. **Design and Analysis of a Hidden Peer-to-peer Backup Market.** **Sven Seuken**, Denis Charles, Max Chickering, Mary Czerwinski, Kamal Jain, David C. Parkes, Sidd Puri, and Desney Tan.(PDF)
60. **Behavioral Factors in Market User Interface Design.** **Sven Seuken**, David C. Parkes, Eric Horvitz, Kamal Jain, Mary Czerwinski, and Desney Tan. Working paper.(PDF)
61. **Work Accounting Mechanisms: Theory and Practice.** **Sven Seuken**, Michel Meulpolder, Dick H. J. Epema, David C. Parkes, Johan A. Pouwelse, and Jie Tang. Working paper.(PDF)

## Invited Talks/Presentations (Selected)

- 2018 Invited talk at the “Economics of Data” workshop sponsored by the Warren Center for Network & Data Sciences at UPenn
- 2018 Talks at Microsoft Research NYC, Google Research NYC, and Google Research Mountain View
- 2018 Invited talk in the Microeconomics Theory Seminar at Boston College
- 2018 Panelist in the AAMAS-IJCAI AI<sup>3</sup> workshop on the topic of “ML and (vs.?) AGT”
- 2018 Invited talk in the "Mathematical Computer Science" seminar series of the Goethe University in Frankfurt, Germany
- 2017 Invited talk in the ETH Zurich Control Seminar Series
- 2017 Invited talk at the AI in Finance Summit, Zurich
- 2017 Keynote talk at the Dagstuhl seminar on *Game Theory Meets Computational Learning Theory*
- 2016 Invited talk in the research seminar of the Austrian National Bank (OeNB)
- 2016 Invited to give an *Early Career Spotlight Talk* at IJCAI'16

## Patents

1. **Sven Seuken**, Pertti J. Visuri, Randy Salo, Christian Van Hamersveld, Johanna K. Visuri, and Dan Zagursky. *Systems and Methods for Allocating Alternative Network Access Resources*. June 2018. U.S. Patent: US 10,009,481 B2 .
2. Pertti J. Visuri, Marcel Mahdavi, **Sven Seuken**, Jay Dills, Carlos Rivera, and Dan Zagursky. *Optimized offloading of wireless devices to alternative wireless networks*. June 2018. U.S. Patent Application: 15/845,410.
3. **Sven Seuken**, Pertti J. Visuri, Johanna K. Visuri, and Dan Zagursky. *Systems and methods for allocating and pricing alternative network access resources with reserve prices*. February 2018. U.S. Patents 9,781,277 B2 and 9,900,445 B2.
4. **Sven Seuken**, Denis Xavier Charles, David Maxwell Chickering, and Siddhartha Puri. *Market Design for a Resource Exchange System*. January 2012. U.S. Patent: US 8,108,248 B2.

## Teaching (at UZH)

1. Lecture (MSc + PHD): *Market Design and Machine Learning* (2019)
2. Lecture (MSc + PHD): *Market Design: Theory & Practice* (2018)
3. Lecture(BSc + MSc): *Economics and Computation* (2017, 2016, 2014, 2013, 2012)
4. Lecture (BSc): *Informatics for Economists* (for  $\approx$  750 students, 2015)
5. Lecture (BSc + MSc): *Combinatorial Auctions* (2014)
6. Seminar (BSc + MSc): *Advanced Topics in Economics and Computation* (2015-2018, 2013, 2012)
7. Seminar (BSc + MSc): *Topics at the Interface between Computer Science and Economics* (2011)
8. Continuing Education Courses (1-day courses for professionals):
  - a) *Market Design and Machine Learning* (2018, 2019)
  - b) *Engineering Electronic Markets* (2015)
  - c) *Social Computing* (2014, 2013)

## Advising/Mentoring (at UZH)

- Graduated PhD Student: Timo Mennle, 01/2012 - 02/2016, winner of the “2017 Mercator Award” (CHF 5,000) for best inter-disciplinary PhD thesis at the Faculty of Economics, Business and Informatics
- Current PhD Students:
  1. Mike Shann (since 12/2011), [expected graduation: July, 2019 (took 2 years leave of absence)]
  2. Gianluca Brero (since 9/2014), [expected graduation: July, 2019]
  3. Dmitry Moor (since 9/2014), [expected graduation: July, 2019]
  4. Steffen Schuldenzucker (since 9/2014), [expected graduation: July 2019]
  5. Ludwig Dierks (since 10/2015),
  6. Vitor Bosshard (since 9/2016)
  7. Stefania Ionescu (since 9/2018)
  8. Jakob Weisstener (since 9/2018)
  9. Nils Olberg (since 10/2018)
- Masters students supervised: 6 completed MSc theses
- Bachelors students supervised: 11 completed BSc theses, 3 winners of the “best BSc thesis prize”

## Other Work (not listed above)

02/2018– 12/2018	Senior Advisor (Market Design) for Covee Network (Zurich, Switzerland)
01/2018– now	Senior Market Designer for Tremor Technologies, Inc. (Greenwich, CT, USA)
01/2018– now	Founder of Market Design Consulting GmbH (Baar, Switzerland)
09/2017– now	Chief Economist at BandwidthX, Inc. (Carlsbad, California, USA)
08/2017– now	Co-founder of Legal Tech GmbH (Baar, Switzerland)
06/2013– 2017	Independent consultant on market design topics, e.g., for BandwidthX, Inc. (Carlsbad, California) and LzLabs (Zürich, Switzerland)
12/2010	Consulting Researcher for Microsoft Research, Redmond, WA
09/2006 – 06/2011	Graduate Research Assistant for David C. Parkes, Harvard University
06/2005 – 06/2006	Graduate Research Assistant for Shlomo Zilberstein, UMass Amherst
02/2002 – 08/2004	Research Assistant for Günter Müller, University of Freiburg
10/2000 – 08/2001	Civil Service (Rheinische Kliniken, Bedburg-Hau)

## Professional Services/Memberships

- Member of the Editorial Board/Associate Editor of *ACM Transactions on Economics and Computation (TEAC)*, since 2018
- Senior Program Committee Member for: EC’19, AAAI’19, EC’18, IJCAI’16
- Member of the 2018 ACM SIGecom Committee for the Award for Best Presentation by a Student or Postdoctoral Researcher
- Member of the Editorial Board of the *Journal of Artificial Intelligence Research (JAIR)* 2014-2017
- Member of the IJCAI’16 Reviewing Best Practices Panel
- Program Committee Member for: AAAI’18, CI’18, EC’17, EC’16, AAAI’16, EC’15, AAAI’15, EC’14, AAAI’14, EC’13, IJCAI’13, AAAI’13, SCUGC’13, EC’12, AAMAS’12, SCUGC’12, IJCAI’11, AMMA’11
- Journal Reviewer for: *Operations Research, Journal of Autonomous Agents and Multi-Agent Systems, Economic Theory, Experimental Economics, MISQ, Transactions on Economics and Computation, Electronic Commerce Research, Computer Supported Cooperative Work, Transactions on Cloud Computing*
- Conference Reviewer for: IMWUT’18, FC’13, ECIS’13, CHI’12, EC’11, AAMAS’11, WINE’10, WWW’10, NESCAI’10, IJCAI’09, AAAI’08, AAMAS’08, NESCAI’08
- Co-Organizer of the 4th (German) Day on Computational Game Theory, Zurich, Switzerland, 2017 (together with Paul Dütting, Paolo Penna, and Peter Widmayer)



- Organizing Committee Member for the *Multiagent Sequential Decision-Making Workshop at the 8th International Conf. on Autonomous Agents and Multiagent Systems (AAMAS)*, 2009.
- Memberships: AAAI, ACM, SIGecom

## Selected Services at UZH

- Member of the UZH Blockchain Center, 10/2018 - now
- UZH committee member in the Swiss “PhD Network in Data Science,” 07/2017 - now
- Head of the PhD program at the Department of Informatics, 03/2017 - 08/2018
- Departmental lead for the excellence topic “Computing and Economics,” 2012 - now
- Faculty delegate for the UZH working group on the “Digital Society Initiative,” 2015/2016
- Founding member of the interdisciplinary Competence Center “Information Technology, Society and Law (ITSL)” at the University of Zurich, 2015 - now.
- Co-founder of the “Interdisciplinary Research Lab on Service, Economics, Management and Computation (SEMCom)” at Zhejiang University in China, in collaboration with the Alibaba Group (Hangzhou, China) and the University of Zurich, 11/2013.
- Member of various Promotion/Hiring Committees, 2014 - now
- Member of Study Program Committee, 2013
- Re-design of Departmental Mentoring Program, 2013
- Department-wide Student Workload Analysis, 2012

## Personal Information

- Citizenship: German
- Languages: German (native), English (fluent), French (conversational)

## References

1. Prof. Dr. David C. Parkes (PhD advisor)  
George F. Colony Professor of Computer Science  
Co-Director of the Harvard Data Science Initiative  
Harvard University, School of Engineering and Applied Sciences  
33 Oxford Street, Cambridge, MA 02138  
E-mail: parkes@eecs.harvard.edu
2. Prof. Dr. Alvin E. Roth (Dissertation committee member)  
Craig and Susan McCaw Professor of Economics at Stanford University and  
Gund Professor of Economics and Business Administration Emeritus at Harvard University  
Stanford University, Department of Economics  
579 Serra Mall, Stanford, CA 94305  
E-mail: alroth@stanford.edu Web: