Sven Seuken

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Research Fields

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

Current Academic Appointments

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

- **Associated Faculty**, since 11/2020
  ETH AI Center

Former Academic Appointments

- **Visiting Associate Professor**, 09/2018 – 12/2018
  Stanford University, Palo Alto, CA – hosted by Alvin E. Roth

- **Assistant Professor (Tenure-Track) of Computation and Economics**, 09/2011 − 08/2017
  University of Zurich, Department of Informatics

Internships

- **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.Sc. 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** 2004 − 2006
  M.S. in Computer Science, May 27, 2006
  Advisor: Shlomo Zilberstein

- **University of Freiburg, Germany** 2001 − 2004
  Vordiplom (Intermediate Exam) in Computer Science, August 2003

Honors and Awards

2020	University of Zurich "Teacher of the Hour" Award (during Covid-19 pandemic)
2018	ERC Starting Grant (also listed under grants)
2017	"Top-40 under 40," selected by the German business magazine "Capital"
2016	*Early Career Spotlight Talk* at the International Joint Conference on AI (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 *Machine Learning-based Market Design*; starting data: 1.12.2018; duration: 5 years; amount: **€1,375,000**.
2015 − 2018	Principal Investigator (PI); Microsoft Research grant for the project *Preference Elicitation and Mechanism Design for Complex Dynamic Systems* (UK Microsoft Research PhD Scholarship Programme); starting date: 1.10.2015; duration: 3 years; amount: **€103,150**.
2015 − 2018	Co-PI; European Union (EU) Horizon 2020 research grant for the project *Distributed Global Financial Systems for Society*; starting date: 1.3.2015; duration: 3 years; my portion of the grant (approximate): **CHF 220,000**.
2015 − 2018	PI; Swiss National Science Foundation (SNSF) research grant for the project *Trading off Strategyproofness and Efficiency in Matching Markets*; starting date: 1.1.2015; duration: 3 years; amount: **CHF 281,436**.
2014 − 2017	Co-PI; Swiss National Science Foundation (SNSF) research grant for the project *A Market-based Approach for Querying the Web of Data*; starting date: 1.9.2014; duration: 4 years; total amount: CHF 448,428; my portion: **CHF 224,214**.
2013 − 2016	PI; Swiss National Science Foundation (SNSF) research grant for the project *Foundations of Market User Interface Design and Applications to the Smart Grid*; starting date: 1.4.2013; duration: 3 years; amount: **CHF 179,600**.
2013	PI; Google Faculty Research Award for the project *Human Recommender Systems*; starting date: 1.8.2013; duration: unrestricted; amount: **$76,000**.
2012 − 2013	PI; Hasler Foundation research grant for the project *Designing Matching Systems under Computational, Informational, and Behavioral Constraints*; starting date: 1.10.2012; duration: 1 year; amount: **CHF 50,000**.

Total amount of competitive third party money raised (approx.): CHF 2,500,000 (≈ €2,300,000).

Publications & Working Papers

All publications and working papers are available online at: www.ifi.uzh.ch/ce/publications

Google Scholar profile: https://scholar.google.ch/citations?user=hxckkUIAAAAJ&hl=en

My five most important papers are marked with a ★.

Revise and Re-submit

1. **Designing Core-selecting Payment Rules: A Computational Search Approach.** Benedikt Bünz, Benjamin Lubin, and and **Sven Seuken**. Revision requested by *Information Systems Research (ISR) - Special Issue on Market Design and Analytics*. Extended Abstract published in the *Proceedings of the 19th ACM Conference on Economics and Computation (EC)*, Ithaca, NY, June 2018. Full version (January 2020):(PDF)

Publications (selectively peer-reviewed)

1. ★ **Cloud Pricing: The Spot Market Strikes Back.** Ludwig Dierks and **Sven Seuken**. *Management Science*, 2021:(PDF, open access)

   Extended Abstract published in the *Proceedings of the 20th ACM Conference on Economics and Computation (EC)*, Phoenix, AZ, June 2019.

2. ★ **Partial Strategyproofness: Relaxing Strategyproofness for the Random Assignment Problem.** Timo Mennle and **Sven Seuken**. *Journal of Economic Theory (JET) Volume 191, 105144, January 2021.* :(PDF, open access)

   Extended Abstract published in the *Proceedings of the 15th ACM Conference on Economics and Computation (EC)*, Palo Alto, USA, June 2014.

3. **On the cluster admission problem for cloud computing.** Ludwig Dierks, Ian Kash and **Sven Seuken**. Forthcoming, *Journal of Artificial Intelligence Research (JAIR)*. (PDF on arxiv)

   Supersedes the NetEcon'19 workshop paper listed below.

4. ★ **Computing Bayes-Nash Equilibria in Combinatorial Auctions with Verification.** Vitor Bosshard, Benedikt Bünz, Benjamin Lubin, and **Sven Seuken**. *Journal of Artificial Intelligence Research (JAIR)* 69 (2020):531–570.(PDF, open access)

   Supersedes the IJCAI'17 paper listed below.

5. **Portfolio Compression in Financial Networks: Incentives and Systemic Risk.** Steffen Schuldenzucker and **Sven Seuken**. Extended Abstract published in the *Proceedings of the 21st ACM Conference on Economics and Computation (EC)*, July 2020. Full version (August 2020):(PDF)

6. **The Competitive Effects of Variance-based Pricing.** Ludwig Dierks and **Sven Seuken**. In *Proceedings of the 29th International Joint Conference on Artificial Intelligence (IJCAI-20)*, Yokohama, Japan, July 2020.(PDF)

7. ★ **Default Ambiguity: Credit Default Swaps Create New Systemic Risks in Financial Networks.** Steffen Schuldenzucker, **Sven Seuken**, and Stefano Battiston. **Management Science**, 2020, Vol. 66(5):1981–1998. (PDF, open access)

8. **Deep Learning-powered Iterative Combinatorial Auctions.** Jakob Weissteiner and **Sven Seuken**. In *Proceedings of the Thirty-fourth AAAI Conference on Artificial Intelligence (AAAI-20)*, New York, NY, February 2020.(PDF on arxiv)

9. **Fast Iterative Combinatorial Auctions via Bayesian Learning.** Gianluca Brero, Sébastien Lahaie, and **Sven Seuken**. In *Proceedings of the Thirty-third AAAI Conference of Artificial Intelligence (AAAI-19)*, Honolulu, USA, January 2019.(PDF)

10. ★ **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 (IJCAI-18)*, Stockholm, Sweden, July 2018.(PDF)

11. **Non-decreasing Payment Rules for Combinatorial Auctions.** Vitor Bosshard, Ye Wang, and **Sven Seuken**. In *Proceedings of the 26th International Joint Conference on Artificial Intelligence (IJCAI)*, Stockholm, Sweden, July 2018.(PDF)(long)

12. **Designing Core-selecting Payment Rules: A Computational Search Approach.** Benedikt Bünz, Benjamin Lubin, and and **Sven Seuken**. Extended Abstract published in the *Proceedings of the 19th ACM Conference on Economics and Computation (EC)*, Ithaca, NY, June 2018. Full version (January 2020):(PDF)

13. **First-Choice Maximal and First-Choice Stable School Choice Mechanisms.** Umut Dur, Timo Mennle, and **Sven Seuken**. In Proceedings of the 19th ACM Conference on Economics and Computation (EC), Ithaca, NY, June 2018.(acm.org) (PDF including appendix on SSRN)

14. **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)

15. **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)

16. **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)

17. **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)*, Sao Paulo, Brazil, May 2017.(PDF)

18. **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)*, Sao Paulo, Brazil, May 2017.(PDF)

19. **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)

20. **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. Working paper version:(PDF)

21. **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. Working paper version:(PDF)

22. **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. Working paper version:(PDF)

23. **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.

24. **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)

25. **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)

26. **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)

27. **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)

28. **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)

29. **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)

30. **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. Working paper version:(PDF)

31. **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)

32. **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 (AA-MAS),* Paris, France, May 2014.(PDF)

33. **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)

34. **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)

35. **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)

36. **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)

37. **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)

38. **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)

39. **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)

40. **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)

41. **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)

42. **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)

43. **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)

44. **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)

45. **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)

46. **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)

47. **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)

48. **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)

Lightly Reviewed and Invited Publications

49. **On the cluster admission problem for cloud computing.** Ludwig Dierks, Ian Kash and **Sven Seuken**. In Proceedings of the 14th Workshop on the Economics of Networks, Systems and Computation (NetEcon), June 2019.(PDF) (full paper on arxiv)

50. **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 Workshop on Decentralizing the Semantic Web, Vienna*, Austria, October 2017.(PDF)

51. **Relaxing Strategyproofness in One-sided Matching.** Timo Mennle and **Sven Seuken**. *ACM SIGecom Exchanges*, Vol. 13, No. 1, June 2014.(PDF)

52. **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)

53. **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)

54. **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)

55. **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)

56. **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

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

Recent Working Papers

58. **Machine Learning-powered Iterative Combinatorial Auctions** Gianluca Brero, Benjamin Lubin, and **Sven Seuken**. September 2020.(PDF on arxiv)

59. **Machine Learning-powered Iterative Combinatorial Auctions with Interval Bidding.** Manuel Beyeler, Gianluca Brero, Benjamin Lubin, and **Sven Seuken**. September 2020.(PDF on arxiv)

60. **Fourier Analysis-based Iterative Combinatorial Auctions.** Jakob Weissteiner, Chris Wendler, **Sven Seuken**, Ben Lubin, and Markus Püschel. September 2020.(PDF on arxiv)

61. **Revenue Maximization for Consumer Software: Subscription or Perpetual License?** Ludwig Dierks and **Sven Seuken**. September 2020.(PDF on arxiv)

62. **The Cost of Simple Bidding in Combinatorial Auctions** Vitor Bosshard and **Sven Seuken**. Working paper. February 2020. Draft available on request.

63. **Monotonic and Non-Monotonic Solution Concepts for Generalized Circuits.** Steffen Schuldenzucker and **Sven Seuken**. July 2019.(PDF on arxiv)

64. **The Computational Complexity of Clearing Financial Networks with Credit Default Swaps.** Steffen Schuldenzucker, **Sven Seuken**, and Stefano Battiston. May 2019. (PDF on arxiv)

Older Working Papers and Retired Papers

65. **Enabling Trade-offs in Machine Learning-based Matching for Refugee Resettlement.** Nils Olberg and **Sven Seuken**. June 2019.(PDF)

66. **The Design of a Combinatorial Data Market.** Dmitry Moor, **Sven Seuken**, Tobias Grubenmann, and Abraham Bernstein. December 2018.(PDF)

67. **New Core-Selecting Payment Rules with Better Fairness and Incentive Properties.** Benjamin Lubin, Benedikt Bünz, and **Sven Seuken**. April 2016.(PDF)

68. **Trade-offs in School Choice: Comparing Deferred Acceptance, the Classic and the Adaptive Boston Mechanism.** Timo Mennle and **Sven Seuken**. July 2017.(PDF on arxiv)

69. **Hybrid Mechanisms: Trading Off Strategyproofness and Efficiency of Random Assignment Mechanisms.** Timo Mennle and **Sven Seuken**. July 2017.(PDF on arxiv)

70. **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. December 2015. (PDF)

71. **Behavioral Factors in Market User Interface Design. Sven Seuken**, David C. Parkes, Eric Horvitz, Kamal Jain, Mary Czerwinski, and Desney Tan. March 2013.(PDF)

72. **Work Accounting Mechanisms: Theory and Practice. Sven Seuken**, Michel Meulpolder, Dick H. J. Epema, David C. Parkes, Johan A. Pouwelse, and Jie Tang.(PDF)

73. **Selfishness vs. Altruism in P2P Networks: A Field Experiment. Sven Seuken**, Johan Pouwelse, and David Parkes. Work in progress.

Patents

1. Pertti Visuri, Randy Salo, **Sven Seuken**, Jay Dills, Fabio Elia Isler, Christian Van Hamersveld, Johanna Visuri, Dan Zagursky. *Cross-Optimization in Mobile Networks.* February 2020. U.S. Patent Application: 16/800,836.

2. **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.* June 2018. U.S. Patent: 10,009,481 B2.

3. 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: 15/854,410.

4. **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.* February 2018. U.S. Patents 9,781,277 B2 and 9,900,445 B2.

5. **Sven Seuken**, Denis Xavier Charles, David Maxwell Chickering, and Siddhartha Puri. *Market Design for a Resource Exchange System.* January 2012. U.S. Patent 8,108,248 B2.

Invited Talks/Presentations (Selected)

2020	Invited talk as part of the "AI Week" of the UZH Digital Society Initiative
2019	Talk at the NBER Market Design Working Group Meeting
2019	Invited Talk in the Research Colloquium of the Department of Informatics at the TU Munich
2019	Invited Talk at the Center for Social and Economic Behavior (University of Cologne)
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 AI³ 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 at 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 at the research seminar of the Austrian National Bank (OeNB)
2016	Invited to give an *Early Career Spotlight Talk* at IJCAI'16

Teaching (at UZH)

1. Lecture (BSc + MSc): *Economics and Computation* (2020, 2017, 2016, 2015, 2014, 2013, 2012)
2. Lecture (MSc + PhD): *Market Design and Machine Learning* (2021, 2019)
3. Lecture (BSc): *Foundations of Computing II* (2020)
4. Lecture (MSc + PhD): *Market Design: Theory & Practice* (2018)
5. Lecture (BSc): *Informatics for Economists* (for $\approx$ 750 students, 2015)
6. Lecture (BSc + MSc): *Combinatorial Auctions* (2014)
7. Seminar (BSc + MSc): *Advanced Topics in Economics and Computation* (2015 − 2018, 2013, 2012)
8. Seminar (BSc + MSc): *Topics at the Interface between Computer Science and Economics* (2011)
9. UZH Executive MBA core module (3 days) on "Digital Markets and Network Thinking" (2021, 2019)
10. Other Continuing Education Courses (1-day courses for professionals)
    a) *Market Design and Machine Learning* (2020, 2019, 2018)
    b) *Engineering Electronic Markets* (2015)
    c) *Social Computing* (2014, 2015)

Advising/Mentoring (at UZH)

- **Graduated PhD Students**
    1. Dr. Timo Mennle, 01/2012 − 02/2016, winner of "2017 Mercator Award" (CHF 5,000) for best interdisciplinary PhD thesis at the Faculty of Economics, Business and Informatics at UZH
    2. Dr. Dmitry Moor, 09/2014 − 07/2019
    3. Dr. Steffen Schuldenzucker, 09/2014 − 08/2019
    4. Dr. Mike Shann, 12/2011 − 09/2019 (two-year leave of absence from 2016 − 2018)
    5. Dr. Gianluca Brero, 09/2014 − 01/2020
    6. Dr. Ludwig Dierks, 10/2015 − 02/2021
- **Current PhD Students**
    1. Vitor Bosshard, since 09/2016
    2. Jakob Weissteiner (since 09/2018)
    3. Nils Olberg (since 10/2018)
    4. Paul Friedrich (since 09/2020)
    5. Ermis Soumalias (since 09/2020)
    6. Behnoosh Zamanlooy (since 09/2020)
- **Bachelor's/Master's Students:** many supervised theses; 3 winners of the "best thesis prize"

Other Work (not listed above)

01/2018− now	Senior Market Designer for Tremor Technologies, Inc. (Boston, MA, USA)
09/2017− now	Chief Economist at BandwidthX, Inc. (Carlsbad, CA, USA)
01/2018− now	Founder and Owner of Market Design Consulting GmbH (Baar, Switzerland)
02/2018 − 12/2018	Senior Advisor (Market Design) for Covee Network (Zurich, Switzerland)
06/2013 − 12/2017	Independent Market Design Consultant 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 Prof. David C. Parkes, Harvard University
06/2005 − 06/2006	Graduate Research Assistant for Prof. Shlomo Zilberstein, UMass Amherst
02/2002 − 08/2004	Research Assistant for Prof. Günter Müller, University of Freiburg
10/2000 − 08/2001	Civil Service (Rheinische Kliniken, Bedburg-Hau)
06/2000 − 05/2003	Web Designer (self-employed)

Professional Services/Reviewing/Memberships

- Associate Editor of *ACM Transactions on Economics and Computation (TEAC)*, since 2018.
- Member of the Editorial Board of the *Journal of Artificial Intelligence Research (JAIR)* 2014-2017.
- Area Chair for IJCAI'21.
- Senior Program Committee Member for: EC'20, EC'19, AAAI'19, EC'18, IJCAI'16.
- Program Committee Member for: AAAI'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.
- Ad-hoc reviewer for Economics/Business Journals: *Econometrica*, *Management Science*, *Operations Research*, *Economic Theory*, *Experimental Economics*, *MISQ*
- Ad-hoc reviewer for CS Journals: *Journal of Autonomous Agents and Multi-Agent Systems*, *Electronic Commerce Research*, *Computer Supported Cooperative Work*, *Transactions on Cloud Computing*
- Ad-hoc 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.
- Chair of the 2019 ACM SIGecom Committee for the Award for Best Presentation by a Student of Postdoctoral Research
- Co-Organizer of the 4th (German) Day on Computational Game Theory, Zurich, Switzerland, 2017 (together with Paul Dütting, Paolo Penna, and Peter Widmayer)
- Member of the IJCAI'16 Reviewing Best Practices Panel
- 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

- Department delegate for the faculty's AACSB input group, 09/2020 - now
- Co-director of the Zurich Market Design Center (ZMDC), 02/2020 – now
- Deparment student advisor, 02/2020 – now
- Member of the UZH Blockchain Center, 10/2018 – now
- UZH delegate in the Swiss "PhD Network in Data Science," $07/2017 - 08/2018$
- Head of the PhD Program at the Department of Informatics, $03/2017 - 08/2018$
- Departmental Lead for "Computing and Economics" Excellence Topic, 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 many 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

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   and Business Administration Emeritus at Harvard University
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