

**Tilman Börgers**  
Curriculum Vitae  
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**Work address:**

University of Michigan  
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**Citizenship:** Germany and US

**Education**

Habilitation, Universität Basel, 1993

PhD in Economics, London School of Economics, 1987

Diplom Volkswirt, Universität Köln, 1983

**Employment**

Samuel Zell Professor of the Economics of Risk, University of Michigan (since 2005)

Visitor, Cowles Foundation for Research in Economics, Yale University, 2018 – 2019

Professor of Economics, University College London, 1996 - 2005

Reader in Economics, University College London, 1993 - 1996

Lecturer in Economics, University College London, 1991 - 1993

Assistent, Universität Basel, 1987 – 1991

**Administrative Service (Selected)**

Member of the Executive Committee, Economics Department, University of Michigan, 2005 - 2007

Director, Centre for Economic Learning and Social Evolution, Departments of Economics, Psychology and Mathematics, University College London, 2002 - 2005

Acting Director, Centre for Economic Learning and Social Evolution, Departments of Economics, Psychology and Mathematics, University College London, 2001 – 2002

### **Editorial Service**

*Journal of Economic Theory* (associate editor 2015 – 2019, lead editor 2020 - 2023)

*Review of Economic Design* (associate editor 2012 – 2015, editor in chief 2015 - 2018)

*Journal of Economic Literature* (editorial board member 2013 - 2015)

*The B.E. Journals in Theoretical Economics* (editorial board member 2004 - 2011)

*Games and Economic Behavior* (editorial board member 2004 - 2011)

*Mathematical Social Sciences* (editorial board member 1998 - 2003)

*Ricerche Economiche* (editorial board member 1996 - 2001)

*Review of Economic Studies* (assistant editor 1992 – 1994, managing editor 1994 - 1995, editorial board member 1995 - 2001)

### **Professional Service**

Elected Member, Council of the Game Theory Society, 2015-2021.

Program Committee, NSF/CEME Decentralization Conference, 2017, 2019.

Program Chair or Co-Chair, Midwest Economic Theory Meetings, Fall 2007 and Fall 2013.

Member, Program Committee, World Congress of the Econometric Society, 2005.

Member, Program Committee, European Meeting of the Econometric Society, 1996, 1997, 1998, 2001, and 2002.

Member, Program Committee, Annual Meeting of the European Economic Association, 2001.

Co-organizer (with Ben Newell and Peter Todd), workshop on “Exploring the Boundaries of Rationality”, jointly organized by the Centre for Economic Learning and Social Evolution (London) and the Centre for Adaptive Behaviour and Cognition (Berlin), June 2003.

Co-organizer, ESRC Research Seminars in Game Theory, 2003 - 2005 (with V. Bhaskar and Bhaskar Dutta). Funded by ESRC Conference Grant RES 451 260010 (£15,563).

Co-organizer, ESRC Research Seminars in Game Theory, 1997 - 2000 (with Murali Agastya and Martin Cripps). Funded by ESRC Conference Grants R451 26448496 (£13,940) and R451 26477098 (£12,546).

## **Honors**

Fellow of the Game Theory Society, 2021.

Economic Theory Fellow, 2011.

Michigan Economics Society's Outstanding Professor, Fall 2010.

Prize for the best paper in the *Economic Journal* in 2005 (for: "Strange Bids: Bidding Behaviour in the United Kingdom's Third Generation Spectrum Auction", joint with Christian Dustmann).

## **Grants**

National Science Foundation, 2007 - 014 (ca. \$ 3000,000, IGERT grant for: Incentive-Centered Design For Information And Communication Systems, PI: Yan Chen, co-PIs: Tilman Börgers, Daniel Grosu, Jeffrey MacKie-Mason, and Michael Wellman)

National Science Foundation (\$10,392, for experimental research conducted by Doug Smith and Mary Rigdon)

Economic and Social Research Council, 2005-2010 (ca. £ 2,900,000, joint with Mark Armstrong, Celia Heyes, Steffen Huck, David Shanks, and Rob Seymour, for an interdisciplinary research centre on economic learning and social evolution)

Economic and Social Research Council, 2003 - 2006 (£ 148,876, joint with Steffen Huck and Hide Ichimura, for research on quantitative methods for behavioural mechanism design)

Economic and Social Research Council, 1994-1996 (£ 24,240 UK Pounds, for research on learning processes in game theory)

Schweizerischer Nationalfonds, 1990 - 1991 (for a visit to the University of California at San Diego)

Studienstiftung des deutschen Volkes, 1985 - 1987 (for graduate studies)

Deutscher Akademischer Austauschdienst, 1984 - 1985 (for graduate studies)

Cusanuswerk, 1979-1983 (for undergraduate studies)

## **Seminar Presentations Since 2015**

London School of Economics November 2022; University of Texas, Austin, May 2022; University College London, April 2022; Copenhagen, April 2021; University of Economics; Ho Chi Minh City, February 2021; Virtual Seminars in Economic Theory, October 2020; Rochester, October 2020; CMU/Pittsburgh, September 2020; Seoul National University, May 2019; Boston University, April 2019; Western University, April 2019; Caltech, March 2019; University of Windsor, March 2019; University of Nebraska, March 2019; Yale, September 2018; Chicago, June 2018; Hebrew University May 2018; Tel Aviv, May 2018; Bar Ilan, May 2018; Frankfurt, May 2018; Mannheim, May 2018; Warwick, May 2018; University College London, May 2018; Chinese University of Hong Kong, March 2018; Hong Kong Baptist University, March 2018; Hong Kong University, February 2018; Michigan State University, February 2018; Columbia University, November 2017; Arizona State University, October 2017; Singapore Management University, February 2017; National University of Singapore, February 2017; Duke University, November 2015; University of Guelph, November 2015; University of Zürich, October 2015; University of Bielefeld, July 2015; Virginia Tech, May 2015; Université de Montreal, March 2015; University of Pittsburgh and Carnegie Mellon University (joint seminar), March 2015; National University of Singapore, February 2015.

## **Conference Presentations Since 2015**

European Summer Symposium in Economic Theory, Gerzensee, July 2022; Australasian Economic Theory Workshop, November 2021; Nobel Symposium, Complex Systems, Michigan, December 2020; Stony Brook Game Theory conference, July 2020, Theory Foundations Conference, University of California at San Diego, January 2020, Annual Meeting of the European Economic Association, Manchester, August 2019, Game Theory Workshop, Stony Brook, July 2019; Nemmers Prize Conference, Northwestern University, May 2019; Centralization vs Decentralization Conference, Bath University, January 2019; Economic Theory Conference, Pennstate University, December 2018; Montreal Economic Theory conference, November 2017, Society for the Advancement of Economic Theory, Faro, June 2017. Society for Economic Design, York, June 2017. Midwest Workshop on Control and Game Theory, Ann Arbor, April 2017. Workshop on Mechanism Design, NYU Abu Dhabi, December 2016. World Congress of the Game Theory Society, Maastricht, July 2016. International Conference on Microeconomic Theory, Peking University, June 2016; Midwest Economic Theory Conference, University of Rochester, April 2016; Symposium on the Analysis of Revealed Preferences, University of St Andrews, March 2016; Society for Economic Design, Istanbul, July 2015; Society for the Advancement of Economic Theory, Cambridge (UK), July 2015

## Teaching at the University of Michigan

### Undergraduate:

1. Econ 401 Intermediate Microeconomic Theory (Fall 2009, Winter 2009, Winter 2011, Winter 2012, Winter 2013, Fall 2014, Winter 2016, Fall 2017, Winter 2018)
2. Econ 403 Advanced Economic Theory (Winter 2006, Winter 2007, Winter 2008)
3. Econ 495 Seminar in Economics (Fall 2015, Fall 2020, Fall 2021, Fall 2022)
4. Econ 498 Undergraduate Research (Winter 2021)

### Graduate:

1. Econ 600 Mathematics for Economists (Fall 2013, Fall 2016)
2. Econ 602 Game Theory (Fall 2005, Fall 2006, Fall 2007, Fall 2008, Fall 2019, Winter 2022)
3. Econ 603 General Equilibrium Theory (Fall 2012, Fall 2013, Fall 2014, Fall 2015, Fall 2016, Fall 2017, Fall 2019, Fall 2020, Fall 2021)
4. Econ 617 Advanced Game Theory (Fall 2006, Fall 2007, Fall 2010, Fall 2011, Fall 2012, Fall 2019, Fall 2020, Fall 2021, Fall 2022)
5. Econ 619/20 Advanced Theory (Winter 2006, Winter 2009, Winter 2011, Winter 2013, Winter 2015, Winter 2017, Winter 2020, Winter 2021)
6. Econ 695/696 (Fall 2022, Winter 2023)

### PhD Students with completed dissertations for whom I serve or have served as committee chair or co-chair

1. Yiming Liu, ongoing.
2. Xienan Cheng, *Essays on Information Economics*, 2022 (Peking University).
3. Tangren Feng, *Three Essays on Economic Theory*, 2020 (co-chair with Shaowei Ke; Decision Sciences, Bocconi).
4. Kookyong Han, *Essays on Microeconomic Theory*, 2018.
5. Taejun Oh, *Essays on Game Theory*, 2016, Samsung.
6. Qinggong Wu, 2016 (co-chair with Stephan Lauer mann). Chinese University of Hong Kong.
7. Yan-Min Choo, *Two Essays on Divorce and one Essay on Utilitarianism*, 2015 (co-chair with Martha Bailey).
9. Bartley Tablante, *Learning and Beliefs in Non-Centralized Markets*, 2015, now in private consulting.
9. Josh Cherry, 2011 (co-chair with Lones Smith), now at Amazon
10. Doug Smith, *Robust Mechanism Design*, 2011, now at the Federal Trade Commission.
11. Katalin Bognar, *Essays on Costly Voting*, 2008, now in private consulting.
12. Martin Bøg, *Endogenous Social Interactions*, 2006.
13. Pedro Rey, *Psychology, Economics and Incentives*, 2005, now at ESADE Business School, Universidad Ramón Llull (co-chair with Steffen Huck).
14. Peter Postl, *Mechanism Design for Information Acquisition*, 2004, now at the

University of Bath.

15. Angel Hernando, *Essays on Auction Theory*, 2000, now at the University of Carlos III, Madrid, and at Durham University.

16. Antonio Morales, *Learning, Imitation, and Economic Rationality*, 1999, now at the University of Malaga.

17. Nir Vulkan, *Uncertainty, Information Acquisition, and Economic Equilibria*, 1996, now at the Said Business School (Oxford), (co-chair with Ken Binmore).

18. Antonella Ianni, *Interaction Patterns, Learning Processes, and Equilibria in Population Games*, 1996, now at the University of Southampton.

## Book

*An Introduction to the Theory of Mechanism Design*, (with a chapter by Daniel Krähmer and Roland Strausz), Oxford University Press, 2015.

## Journal Articles

1. Strategically Simple Mechanisms (with Jiangtao Li), *Econometrica* 87 (2019), 2003-2035.
2. (No) Foundations of Dominant-Strategy Mechanisms: A Comment on Chung and Ely (2007), *Review of Economic Design* 21 (2017), 73-82.
3. A Counterexample to Dhillon (1998) (with Yan-Min Choo), *Social Choice and Welfare* 48 (2017), 837-843.
4. Optimal Voting Rules When Voting is Costly (with Katalin Bognar and Moritz Meyer-ter-Vehn), *Journal of Economic Theory*, 159 (2015), 1056-1073.
5. Robust Mechanism Design and Dominant Strategy Voting Rules (with Doug Smith), *Theoretical Economics* 9 (2014), 339-360.
6. Equilibrium Bids in Sponsored Search Auctions: Theory and Evidence (with Ingemar Cox, Martin Pesendorfer and Vaclav Petricek), *American Economic Journal, Microeconomics* 5 (2013), 163-187.
7. When are Signals Complements or Substitutes? (with Angel Hernando-Veciana and Daniel Krähmer), *Journal of Economic Theory*, 148 (2013), 165-195.
8. Robustly Ranking Mechanisms (with Doug Smith), *American Economic Review (Papers and Proceedings)* 102 (2012), 325-329.
9. Efficient Compromising (with Peter Postl), *Journal of Economic Theory* 144 (2009), 2057-2076.
10. A Note on Budget Balance under Interim Participation Constraints: The Case of Independent Types (with Peter Norman), *Economic Theory* 39 (2009), 477-489.
11. Information Invariant Equilibria of Extensive Games (with Timothy McQuade), *The B.E. Journal of Theoretical Economics (Contributions)*, Vol. 7 (2007), Article 42.
12. Strange Bids: Bidding Behaviour in the United Kingdom's Third Generation Spectrum Auction, *Economic Journal*, 115 (2005), 551-578 (with Christian Dustmann).
13. Costly Voting, *American Economic Review* 94 (2004), 57 - 66.
14. Expedient and Monotone Learning Rules, *Econometrica* 72 (2004), 383 – 405 (with Antonio Morales and Rajiv Sarin).

15. Awarding Telecom Licenses: The Recent European Experience, *Economic Policy* 36 (2003), 216-268 (with Christian Dustmann).
16. Rationalizing the UMTS Spectrum Bids: The Case of the UK Auction, *Ifo Studien* 48 (2002), 77 - 109 (with Christian Dustmann). [Reprinted in: Gerhard Illing and Ulrich Klüh (editors), *Spectrum Auctions and Competition in Telecommunications*, Cambridge: MIT Press, 2003, 119 - 157.]
17. The British UMTS Auction: A Response to Klemperer and Schmidt, *Ifo Studien* 48 (2002), 121 - 122 (with Christian Dustmann). [Reprinted in: Gerhard Illing and Ulrich Klüh (editors), *Spectrum Auctions and Competition in Telecommunications*, Cambridge: MIT Press, 2003, 171 - 172.
18. Naïve Reinforcement Learning With Endogenous Aspirations, *International Economic Review* 41 (2000), 921 - 950 (with Rajiv Sarin). I
19. Is Internet Voting a Good Thing?, *Journal of Institutional and Theoretical Economics* 156 (2000), 531-547.
20. Learning Through Reinforcement and Replicator Dynamics, *Journal of Economic Theory* 77 (1997), 1-14 (with Rajiv Sarin).
21. On the Relevance of Evolution and Learning to Economic Theory, *Economic Journal* 106 (1996), 1274 - 1385.
22. On the Dominance Solvability of Large Cournot Games, *Games and Economic Behavior* 8 (1995), 297 - 321 (with Maarten Janssen).
23. Weak Dominance and Approximate Common Knowledge, *Journal of Economic Theory* 64 (1994), 265 - 276.
24. Pure Strategy Dominance, *Econometrica* 61 (1993), 423 - 430.
25. 'Cautious' Utility Maximization and Iterated Weak Dominance, *International Journal of Game Theory* 21 (1992), 13 - 25 (with Larry Samuelson).
26. Iterated Elimination of Dominated Strategies in a Bertrand-Edgeworth Model, *Review of Economic Studies* 59 (1992), 163 - 176.
27. Undominated Strategies and Coordination in Normalform Games, *Social Choice and Welfare* 8 (1991), 65 - 78.
28. Upper Hemicontinuity of the Correspondence of Subgame-Perfect Equilibrium Outcomes, *Journal of Mathematical Economics* 20 (1991), 89-106.
29. Perfect Equilibrium Histories of Finite and Infinite Horizon Games, *Journal of Economic Theory* 47 (1989), 218-227.

### Contributions to Books:

1. Complexity Constraints and Adaptive Learning: An Example, in: S. Huck (editor), *Advances in Understanding Strategic Behaviour: Game Theory, Experiments, and Bounded Rationality: Essays in Honour of Werner Güth*, Basingstoke: Palgrave, 2004 (with Antonio Morales).
2. Auction Theory for Auction Design, in: M. Janssen (editor), *Auctioning Public Assets*, Cambridge: Cambridge University Press, 2003, 19-63 (with Eric van Damme).
3. The Design of Treasury Bond Auctions: Some Case Studies, in: M. Janssen (editor), *Auctioning Public Assets*, Cambridge: Cambridge University Press, 2003, 230-256 (with Joe Swierzbinski).
4. When Does Learning Lead to Nash Equilibrium?, in K. Inderfurth et al. (editors), *Operations Research Proceedings 1999*, Berlin etc.: Springer Verlag, 2000, 176-

- 202.
5. Comments on Economics and Language, in: A. Rubinstein, *Economics and Language*, Cambridge: Cambridge University Press, 2000, 108 – 113.
  6. Game Theory (Economic Applications), in: A. Kuper and J. Kuper (editors), *The Social Science Encyclopedia* (2<sup>nd</sup> edition), London: Routledge, 1996, p. 325. Revision forthcoming in the 3<sup>rd</sup> edition.
  7. A Note on Implementation and Strong Dominance, in: W. Barnett, H. Moulin, M. Salles and N. Schofield (editors), *Social Choice, Welfare and Ethics*, Cambridge: Cambridge University Press, 1995, 277 – 287.

### **Working Papers Available on My Website**

1. Dominance and Optimality (with Xienan Cheng), 2023.
2. Revealed Relative Utilitarianism (with Yan-Min Choo), 2017.
3. Common Prior Type Spaces in Which Payoff Types and Belief Types are Independent (with Taejun Oh), 2012.
4. Complexity Constraints in Two-Armed Bandit Problems: An Example (with Antonio Morales), 2004.
5. Putting Trembles into the Extensive Form, 1992.
6. Consistent Pairs in Extensive Games, 1992.
7. Robustness of Bertrand's Equilibrium in a General Model of Product Differentiation, 1988.
8. Bertrand Competition Without Demand Rationing, 1985.

### **Working in Progress**

1. Learning in Incomplete Information Games (with George Mailath).
2. Most informative joint distributions (with Xienan Cheng).

### **Consulting**

I have acted as consultant on auctions to the Radiocommunications Agency (UK), the Office of Gas and Electricity Markets (UK), the Dutch Parliament, the Dutch Ministry of Economic Affairs, National Economic Research Associates, and, occasionally, to smaller commercial clients. All consulting has taken place earlier than 2010.