Bibliography

Tim Abbott, Daniel Kane, and Paul Valiant. On the complexity of two-player win-lose games. In *Proceedings of the Annual Symposium on Foundations of Computer Science (FOCS)*, 2005.

Nir Ailon, Moses Charikar, and Alantha Newman. Aggregating inconsistent information: Ranking and clustering. In *Proceedings of the Annual Symposium on Theory of Computing (STOC)*, 2005.

K. Akcoglu, J. Aspnes, B. DasGupta, and M. Y. Kao. Opportunity cost algorithms for combinatorial auctions. *Applied Optimization: Computational Methods in Decision-Making, Economics and Finance*, pages 455–479, 2002.

Noga Alon. Ranking tournaments. *SIAM Journal of Discrete Mathematics*, 20:137–142, 2006.

Martin Andersson and Tuomas Sandholm. Time-quality tradeoffs in reallocative negotiation with combinatorial contract types. In *Proceedings of the National Conference on Artificial Intelligence (AAAI)*, pages 3–10, Orlando, FL, 1999.

Martin Andersson and Tuomas Sandholm. Contract type sequencing for reallocative negotiation. In *Proceedings of the Twentieth International Conference on Distributed Computing Systems*, Taipei, Taiwan, April 2000.

Krzysztof R. Apt. Uniform proofs of order independence for various strategy elimination procedures. *Contributions to Theoretical Economics*, 4(1), 2004.

Aaron Archer and Eva Tardos. Frugal path mechanisms. In *Annual ACM-SIAM Symposium on Discrete Algorithms (SODA)*, pages 991–999, 2002.

Aaron Archer, Christos Papadimitriou, K Tawar, and Eva Tardos. An approximate truthful mechanism for combinatorial auctions with single parameter agents. In *Annual ACM-SIAM Symposium on Discrete Algorithms (SODA)*, 2003.

S. Areborg, D. G. Corneil, and A. Proskurowski. Complexity of finding embeddings in a K-tree. *SIAM Journal on Algebraic and Discrete Methods*, 8:277–284, 1987.

Mark Armstrong. Optimal multi-object auctions. *Review of Economic Studies*, 67:455–481, 2000.

Kenneth Arrow. *Social choice and individual values*. New Haven: Cowles Foundation, 2nd edition, 1963. 1st edition 1951.

Kenneth Arrow. The property rights doctrine and demand revelation under incomplete information. In M Boskin, editor, *Economics and human welfare*. New York Academic Press, 1979.

Lawrence Ausubel and Paul Milgrom. Ascending auctions with package bidding. *Frontiers of Theoretical Economics*, 1, 2002. No. 1, Article 1.

Lawrence M. Ausubel and Paul Milgrom. The lovely but lonely Vickrey auction. In Peter Cramton, Yoav Shoham, and Richard Steinberg, editors, *Combinatorial Auctions*, chapter 1. MIT Press, 2006.

Christopher Avery and Terrence Hendershott. Bundling and optimal auctions of multiple products. *Review of Economic Studies*, 67:483–497, 2000.

Jorgen Bang-Jensen and Carsten Thomassen. A polynomial algorithm for the 2-path problem for semicomplete digraphs. *SIAM Journal of Discrete Mathematics*, 5(3):366–376, 1992.

Yair Bartal, Rica Gonen, and Noam Nisan. Incentive compatible multi-unit combinatorial auctions. In *Theoretical Aspects of Rationality and Knowledge (TARK)*, Bloomington, Indiana, USA, 2003.

Yair Bartal, Rica Gonen, and Pierfrancesco La Mura. Negotiation-range mechanisms: Exploring the limits of truthful efficient markets. In *Proceedings of the ACM Conference on Electronic Commerce (ACM-EC)*, pages 1–8, New York, NY, 2004.

John Bartholdi, III and James Orlin. Single transferable vote resists strategic voting. *Social Choice and Welfare*, 8(4):341–354, 1991.

John Bartholdi, III, Craig Tovey, and Michael Trick. The computational difficulty of manipulating an election. *Social Choice and Welfare*, 6(3):227–241, 1989.

John Bartholdi, III, Craig Tovey, and Michael Trick. Voting schemes for which it can be difficult to tell who won the election. *Social Choice and Welfare*, 6:157–165, 1989.

Nivan A. R. Bhat and Kevin Leyton-Brown. Computing Nash equilibria of action-graph games. In *Proceedings of the 20th Annual Conference on Uncertainty in Artificial Intelligence (UAI)*, Banff, Canada, 2004.

Darse Billings, Neil Burch, Aaron Davidson, Robert Holte, Jonathan Schaeffer, Terence Schauenberg, and Duane Szafron. Approximating game-theoretic optimal strategies for full-scale poker. In *Proceedings of the Eighteenth International Joint Conference on Artificial Intelligence (IJCAI)*, Acapulco, Mexico, 2003.

Ben Blum, Christian R. Shelton, and Daphne Koller. A continuation method for Nash equilibria in structured games. In *Proceedings of the Eighteenth International Joint Conference on Artificial Intelligence (IJCAI)*, Acapulco, Mexico, 2003.

Avrim Blum, Jeffrey Jackson, Tuomas Sandholm, and Martin Zinkevich. Preference elicitation and query learning. *Journal of Machine Learning Research*, 5:649–667, 2004. Early version in COLT-03.

Tilman Borgers. Pure strategy dominance. *Econometrica*, 61(2):423–430, 1993.

Craig Boutilier. Solving concisely expressed combinatorial auction problems. In *Proceedings of the National Conference on Artificial Intelligence (AAAI)*, pages 359–366, Edmonton, Canada, 2002.

Sylvain Bouveret and Jérôme Lang. Efficiency and envy-freeness in fair division of indivisible goods: logical representation and complexity. In *Proceedings of the Nineteenth International Joint Conference on Artificial Intelligence (IJCAI)*, pages 935–940, Edinburgh, UK, 2005.

Felix Brandt and Tuomas Sandholm. (Im)Possibility of unconditionally privacy-preserving auctions. In *International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)*, pages 810–817, New York, NY, USA, 2004.

Felix Brandt and Tuomas Sandholm. On correctness and privacy in distributed mechanisms. In *Agent-Mediated Electronic Commerce (AMEC) workshop*, pages 1–14, New York, NY, 2004.

Felix Brandt and Tuomas Sandholm. Decentralized voting with unconditional privacy. In *International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)*, Utrecht, The Netherlands, 2005.

Felix Brandt and Tuomas Sandholm. Efficient privacy-preserving protocols for multi-unit auctions. In *Proceedings of the Financial Cryptography and Data Security conference(FC), Springer LNCS*, 2005.

Felix Brandt and Tuomas Sandholm. Unconditional privacy in social choice. In *Theoretical Aspects of Rationality and Knowledge (TARK)*, Singapore, 2005.

Andrew Byde. Applying evolutionary game theory to auction mechanism design. In *Proceedings of the ACM Conference on Electronic Commerce (ACM-EC)*, pages 192–193, San Diego, CA, 2003. Poster paper.

Ruggiero Cavallo. Optimal decision-making with minimal waste: Strategyproof redistribution of VCG payments. In *International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)*, Hakodate, Japan, 2006.

Xi Chen and Xiaotie Deng. 3-Nash is PPAD-complete. *Electronic Colloquium on Computational Complexity*, Report No. 134, 2005.

Xi Chen and Xiaotie Deng. Settling the complexity of 2-player Nash equilibrium. *Electronic Colloquium on Computational Complexity*, Report No. 150, 2005.

Ed H. Clarke. Multipart pricing of public goods. *Public Choice*, 11:17–33, 1971.

Dave Cliff. Evolution of market mechanism through a continuous space of auction-types. Technical Report HPL-2001-326, HP Labs, 2001.

William Cohen, Robert Schapire, and Yoram Singer. Learning to order things. *Journal of Artificial Intelligence Research*, 10:213–270, 1999.

Wolfram Conen and Tuomas Sandholm. Preference elicitation in combinatorial auctions: Extended abstract. In *Proceedings of the ACM Conference on Electronic Commerce (ACM-EC)*, pages 256–259, Tampa, FL, October 2001. A more detailed description of the algorithmic aspects appeared in the IJCAI-2001 Workshop on Economic Agents, Models, and Mechanisms, pp. 71–80.

Wolfram Conen and Tuomas Sandholm. Partial-revelation VCG mechanism for combinatorial auctions. In *Proceedings of the National Conference on Artificial Intelligence (AAAI)*, pages 367–372, Edmonton, Canada, 2002.

Vincent Conitzer and Nikesh Garera. Learning algorithms for online principal-agent problems (and selling goods online). In *International Conference on Machine Learning (ICML)*, Pittsburgh, PA, USA, 2006.

Vincent Conitzer and Tuomas Sandholm. Complexity of manipulating elections with few candidates. In *Proceedings of the National Conference on Artificial Intelligence (AAAI)*, pages 314–319, Edmonton, Canada, 2002.

Vincent Conitzer and Tuomas Sandholm. Complexity of mechanism design. In *Proceedings of the 18th Annual Conference on Uncertainty in Artificial Intelligence (UAI)*, pages 103–110, Edmonton, Canada, 2002.

Vincent Conitzer and Tuomas Sandholm. Vote elicitation: Complexity and strategy-proofness. In *Proceedings of the National Conference on Artificial Intelligence (AAAI)*, pages 392–397, Edmonton, Canada, 2002.

Vincent Conitzer and Tuomas Sandholm. Applications of automated mechanism design. In *UAI-03 workshop on Bayesian Modeling Applications*, Acapulco, Mexico, 2003.

Vincent Conitzer and Tuomas Sandholm. Automated mechanism design: Complexity results stemming from the single-agent setting. In *Proceedings of the 5th International Conference on Electronic Commerce (ICEC-03)*, pages 17–24, Pittsburgh, PA, USA, 2003.

Vincent Conitzer and Tuomas Sandholm. Automated mechanism design with a structured outcome space, 2003.

Vincent Conitzer and Tuomas Sandholm. BL-WoLF: A framework for loss-bounded learnability in zero-sum games. In *International Conference on Machine Learning (ICML)*, pages 91–98, Washington, DC, USA, 2003.

Vincent Conitzer and Tuomas Sandholm. Complexity results about Nash equilibria. In *Proceedings of the Eighteenth International Joint Conference on Artificial Intelligence (IJCAI)*, pages 765–771, Acapulco, Mexico, 2003.

Vincent Conitzer and Tuomas Sandholm. Definition and complexity of some basic metareasoning problems. In *Proceedings of the Eighteenth International Joint Conference on Artificial Intelligence (IJCAI)*, pages 1099–1106, Acapulco, Mexico, 2003.

Vincent Conitzer and Tuomas Sandholm. Universal voting protocol tweaks to make manipulation hard. In *Proceedings of the Eighteenth International Joint Conference on Artificial Intelligence (IJCAI)*, pages 781–788, Acapulco, Mexico, 2003.

Vincent Conitzer and Tuomas Sandholm. An algorithm for automatically designing deterministic mechanisms without payments. In *International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)*, pages 128–135, New York, NY, USA, 2004.

Vincent Conitzer and Tuomas Sandholm. Communication complexity as a lower bound for learning in games. In *International Conference on Machine Learning (ICML)*, pages 185–192, Banff, Alberta, Canada, 2004.

Vincent Conitzer and Tuomas Sandholm. Computational criticisms of the revelation principle. In *The Conference on Logic and the Foundations of Game and Decision Theory (LOFT-04)*, Leipzig, Germany, 2004. Earlier versions appeared as a short paper at ACM-EC-04, and in the workshop on Agent-Mediated Electronic Commerce (AMEC-03).

Vincent Conitzer and Tuomas Sandholm. Computing Shapley values, manipulating value division schemes, and checking core membership in multi-issue domains. In *Proceedings of the National Conference on Artificial Intelligence (AAAI)*, pages 219–225, San Jose, CA, 2004. Earlier version: IJCAI-03 workshop on Distributed Constraint Reasoning (DCR-03), Acapulco, Mexico.

Vincent Conitzer and Tuomas Sandholm. Expressive negotiation over donations to charities. In *Proceedings of the ACM Conference on Electronic Commerce (ACM-EC)*, pages 51–60, New York, NY, 2004.

Vincent Conitzer and Tuomas Sandholm. Self-interested automated mechanism design and implications for optimal combinatorial auctions. In *Proceedings of the ACM Conference on Electronic Commerce (ACM-EC)*, pages 132–141, New York, NY, 2004. Early version appeared as a poster in the ACM Conference on Electronic Commerce, 2003, pp. 232–233.

Vincent Conitzer and Tuomas Sandholm. Common voting rules as maximum likelihood estimators. In *Proceedings of the 21st Annual Conference on Uncertainty in Artificial Intelligence (UAI)*, pages 145–152, Edinburgh, UK, 2005.

Vincent Conitzer and Tuomas Sandholm. Communication complexity of common voting rules. In *Proceedings of the ACM Conference on Electronic Commerce (ACM-EC)*, pages 78–87, Vancouver, Canada, 2005.

Vincent Conitzer and Tuomas Sandholm. Complexity of (iterated) dominance. In *Proceedings of the ACM Conference on Electronic Commerce (ACM-EC)*, pages 88–97, Vancouver, Canada, 2005.

Vincent Conitzer and Tuomas Sandholm. Expressive negotiation in settings with externalities. In *Proceedings of the National Conference on Artificial Intelligence (AAAI)*, pages 255–260, Pittsburgh, PA, 2005.

Vincent Conitzer and Tuomas Sandholm. A generalized strategy eliminability criterion and computational methods for applying it. In *Proceedings of the National Conference on Artificial Intelligence (AAAI)*, pages 483–488, Pittsburgh, PA, 2005.

Vincent Conitzer and Tuomas Sandholm. AWESOME: A general multiagent learning algorithm that converges in self-play and learns a best response against stationary opponents. *Machine Learning*, 2006. Short version in ICML-03.

Vincent Conitzer and Tuomas Sandholm. Complexity of constructing solutions in the core based on synergies among coalitions. *Artificial Intelligence*, 170(6-7):607–619, 2006. Earlier version appeared in IJCAI-03, pages 613–618.

Vincent Conitzer and Tuomas Sandholm. Computing the optimal strategy to commit to. In *Proceedings of the ACM Conference on Electronic Commerce (ACM-EC)*, Ann Arbor, MI, 2006.

Vincent Conitzer and Tuomas Sandholm. Failures of the VCG mechanism in combinatorial auctions and exchanges. In *International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)*, pages 521–528, Hakodate, Japan, 2006. Early versions appeared at the AAMAS-04 Agent-Mediated Electronic Commerce (AMEC) workshop, and (as a short paper) at ACM-EC-04.

Vincent Conitzer and Tuomas Sandholm. Incrementally making mechanisms more strategy-proof. In *Multidisciplinary Workshop on Advances in Preference Handling*, Riva del Garda, Italy, 2006.

Vincent Conitzer and Tuomas Sandholm. Nonexistence of voting rules that are usually hard to manipulate. In *Proceedings of the National Conference on Artificial Intelligence (AAAI)*, Boston, MA, 2006.

Vincent Conitzer and Tuomas Sandholm. A technique for reducing normal-form games to compute a Nash equilibrium. In *International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)*, pages 537–544, Hakodate, Japan, 2006. Early version appeared in IJCAI Workshop on Game Theoretic and Decision Theoretic Agents (GTDT), 2005.

Vincent Conitzer, Jérôme Lang, and Tuomas Sandholm. How many candidates are needed to make elections hard to manipulate? In *Theoretical Aspects of Rationality and Knowledge (TARK)*, pages 201–214, Bloomington, Indiana, USA, 2003.

Vincent Conitzer, Jonathan Derryberry, and Tuomas Sandholm. Combinatorial auctions with structured item graphs. In *Proceedings of the National Conference on Artificial Intelligence (AAAI)*, pages 212–218, San Jose, CA, 2004.

Vincent Conitzer, Tuomas Sandholm, and Paolo Santi. Combinatorial auctions with k-wise dependent valuations. In *Proceedings of the National Conference on Artificial Intelligence (AAAI)*, pages 248–254, Pittsburgh, PA, 2005. Draft in Oct., 2003.

Vincent Conitzer, Andrew Davenport, and Jayant Kalagnanam. Improved bounds for computing Kemeny rankings. In *Proceedings of the National Conference on Artificial Intelligence (AAAI)*, Boston, MA, 2006. Early version presented at INFORMS-05.

Vincent Conitzer. Computing Slater rankings using similarities among candidates. In *Proceedings of the National Conference on Artificial Intelligence (AAAI)*, Boston, MA, 2006. Early version appeared as IBM RC 23748, 2005.

Don Coppersmith, Lisa Fleischer, and Atri Rudra. Ordering by weighted number of wins gives a good ranking for weighted tournaments. In *Annual ACM-SIAM Symposium on Discrete Algorithms (SODA)*, 2006.

Thomas Cormen, Charles Leiserson, and Ronald Rivest. *Introduction to Algorithms*. MIT Press, 1990.

George Dantzig. *Linear Programming and Extensions*. Princeton University Press, 1963.

R. K. Dash, S. D. Ramchurn, and N. R. Jennings. Trust-based mechanism design. In *International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)*, pages 748–755, New York, NY, USA, 2004.

Constantinos Daskalakis and Christos Papadimitriou. Three-player games are hard. *Electronic Colloquium on Computational Complexity*, Report No. 139, 2005.

Constantinos Daskalakis, Paul Goldberg, and Christos Papadimitriou. The complexity of computing a Nash equilibrium. *Electronic Colloquium on Computational Complexity*, Report No. 115, 2005.

Claude d'Aspremont and Louis-Andre Gérard-Varet. Incentives and incomplete information. *Journal of Public Economics*, 11:25–45, 1979.

Andrew Davenport and Jayant Kalagnanam. A computational study of the Kemeny rule for preference aggregation. In *Proceedings of the National Conference on Artificial Intelligence (AAAI)*, pages 697–702, San Jose, CA, 2004.

Marie Jean Antoine Nicolas de Caritat (Marquis de Condorcet). Essai sur l'application de l'analyse à la probabilité des décisions rendues à la pluralité des voix. 1785. Paris: L'Imprimerie Royale.

Sven de Vries and Rakesh Vohra. Combinatorial auctions: A survey. *INFORMS Journal on Computing*, 15(3):284–309, 2003.

Sven de Vries, James Schummer, and Rakesh V. Vohra. On ascending auctions for heterogeneous objects, 2003. Draft, Nov.

Christine DeMartini, Anthony Kwasnica, John Ledyard, and David Porter. A new and improved design for multi-object iterative auctions. Technical Report 1054, California Institute of Technology, Social Science, September 1999.

John Dickhaut and Todd Kaplan. A program for finding Nash equilibria. *The Mathematica Journal*, pages 87–93, 1991.

Cynthia Dwork, Ravi Kumar, Moni Naor, and D. Sivakumar. Rank aggregation methods for the web. In *Proceedings of the 10th World Wide Web Conference*, pages 613–622, 2001.

eBay UK. Proxy bidding. 2004. http://pages.ebay.co.uk/help/buyerguide/bidding-prxy.html.

Edith Elkind and Helger Lipmaa. Hybrid voting protocols and hardness of manipulation. In *Annual International Symposium on Algorithms and Computation (ISAAC)*, 2005.

Edith Elkind and Helger Lipmaa. Small coalitions cannot manipulate voting. In *Proceedings of the Financial Cryptography and Data Security conference(FC)*, 2005.

Elaine Eschen and Jeremy Spinrad. An $O(n^2)$ algorithm for circular-arc graph recognition. In *Annual SIAM-ACM Symposium on Discrete Algorithms (SODA)*, pages 128–137, 1993.

Joan Feigenbaum, Christos Papadimitriou, and Scott Shenker. Sharing the cost of mulitcast transmissions. *Journal of Computer and System Sciences*, 63:21–41, 2001. Early version in STOC-00.

Lance Fortnow, Joe Kilian, David M. Pennock, and Michael P. Wellman. Betting boolean-style: a framework for trading in securities based on logical formulas. In *Proceedings of the ACM Conference on Electronic Commerce (ACM-EC)*, pages 144–155, San Diego, CA, 2003.

Drew Fudenberg and Jean Tirole. *Game Theory*. MIT Press, 1991.

Yuzo Fujishima, Kevin Leyton-Brown, and Yoav Shoham. Taming the computational complexity of combinatorial auctions: Optimal and approximate approaches. In *Proceedings of the Sixteenth International Joint Conference on Artificial Intelligence (IJCAI)*, pages 548–553, Stockholm, Sweden, August 1999.

David Gale, Harold W. Kuhn, and Albert W. Tucker. Linear programming and the theory of games. In Tjalling Koopmans, editor, *Activity Analysis of Allocation and Production*. 1951.

Michael Garey and David Johnson. *Computers and Intractability*. W. H. Freeman and Company, 1979.

Michael Garey, David Johnson, and Larry Stockmeyer. Some simplified NP-complete graph problems. *Theoretical Computer Science*, 1:237–267, 1976.

Allan Gibbard. Manipulation of voting schemes. *Econometrica*, 41:587–602, 1973.

Allan Gibbard. Manipulation of schemes that mix voting with chance. *Econometrica*, 45:665–681, 1977.

Itzhak Gilboa and Eitan Zemel. Nash and correlated equilibria: Some complexity considerations. *Games and Economic Behavior*, 1:80–93, 1989.

Itzhak Gilboa, Ehud Kalai, and Eitan Zemel. On the order of eliminating dominated strategies. *Operations Research Letters*, 9:85–89, 1990.

Itzhak Gilboa, Ehud Kalai, and Eitan Zemel. The complexity of eliminating dominated strategies. *Mathematics of Operation Research*, 18:553–565, 1993.

Andrew Gilpin and Tuomas Sandholm. A competitive Texas Hold'em poker player via automated abstraction and real-time equilibrium computation. In *Proceedings of the National Conference on Artificial Intelligence (AAAI)*, Boston, MA, 2006.

Andrew Gilpin and Tuomas Sandholm. Finding equilibria in large sequential games of imperfect information. In *Proceedings of the ACM Conference on Electronic Commerce (ACM-EC)*, Ann Arbor, MI, 2006.

Andrew Goldberg and Jason Hartline. Envy-free auctions for digital goods. In *Proceedings of the ACM Conference on Electronic Commerce (ACM-EC)*, pages 29–35, San Diego, CA, 2003.

Devorah Goldburg and Shannon McElligott. Red cross statement on official donation locations. 2001. Press release, http://www.redcross.org/press/disaster/ds_pr/011017legitdonors.html.

Rica Gonen and Daniel Lehmann. Optimal solutions for multi-unit combinatorial auctions: Branch and bound heuristics. In *Proceedings of the ACM Conference on Electronic Commerce (ACM-EC)*, pages 13–20, Minneapolis, MN, October 2000.

Georg Gottlob, Gianluigi Greco, and Francesco Scarcello. Pure Nash equilibria: hard and easy games. In *Theoretical Aspects of Rationality and Knowledge (TARK)*, pages 215–230, Bloomington, Indiana, USA, 2003.

J Green and J-J Laffont. Characterization of satisfactory mechanisms for the revelation of preferences for public goods. *Econometrica*, 45:427–438, 1977.

Theodore Groves. Incentives in teams. *Econometrica*, 41:617–631, 1973.

Hongwei Gui, Rudolf Müller, and Rakesh Vohra. Characterizing dominant strategy mechanisms with multi-dimensional types, 2004. Working Paper.

E. Hemaspaandra and L. Hemaspaandra. Dichotomy for voting systems. Technical Report 861, University of Rochester, Department of Computer Science, 2005.

E. Hemaspaandra, L. Hemaspaandra, and J. Rothe. Exact analysis of Dodgson elections: Lewis Carroll's 1876 voting system is complete for parallel access to NP. *Journal of the ACM*, 44(6):806–825, 1997.

John Hershberger and Subhash Suri. Vickrey prices and shortest paths: What is an edge worth? In *Proceedings of the Annual Symposium on Foundations of Computer Science (FOCS)*, 2001.

Douglas Hofstadter. *Metamagical Themas*. Basic Books, 1985.

Bengt Holmström. Groves' scheme on restricted domains. *Econometrica*, 47(5):1137–1144, 1979.

Holger Hoos and Craig Boutilier. Solving combinatorial auctions using stochastic local search. In *Proceedings of the National Conference on Artificial Intelligence (AAAI)*, pages 22–29, Austin, TX, August 2000.

Benoit Hudson and Tuomas Sandholm. Effectiveness of query types and policies for preference elicitation in combinatorial auctions. In *International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)*, pages 386–393, New York, NY, USA, 2004. Early versions: CMU tech report CMU-CS-02-124, AMEC-02, SITE-02.

Nathanaël Hyafil and Craig Boutilier. Regret-based incremental partial revelation mechanisms. In *Proceedings of the National Conference on Artificial Intelligence (AAAI)*, Boston, MA, 2006.

Takayuki Ito, Makoto Yokoo, and Shigeo Matsubara. Designing an auciton protocol under asymmetric information on nature's selection. In *International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)*, pages 61–68, Bologna, Italy, 2002.

Takayuki Ito, Makoto Yokoo, and Shigeo Matsubara. Toward a combinatorial auction protocol among experts and amateurs: The case of single-skilled experts. In *International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)*, pages 481–488, Melbourne, Australia, 2003.

Takayuki Ito, Makoto Yokoo, and Shigeo Matsubara. A combinatorial auction among versatile experts and amateurs. In *International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)*, pages 378–385, New York, NY, USA, 2004.

Sergei Izmalkov, Matt Lepinski, and Silvio Micali. Universal mechanism design. In *Proceedings of the Annual Symposium on Foundations of Computer Science (FOCS)*, 2005.

Philippe Jehiel and Benny Moldovanu. How (not) to sell nuclear weapons. *American Economic Review*, 86(4):814–829, 1996.

Radu Jurca and Boi Faltings. Minimum payments that reward honest reputation feedback. In *Proceedings of the ACM Conference on Electronic Commerce (ACM-EC)*, Ann Arbor, MI, 2006.

Richard Karp. Reducibility among combinatorial problems. In Raymond E Miller and James W Thatcher, editors, *Complexity of Computer Computations*, pages 85–103. Plenum Press, NY, 1972.

Michael Kearns, Michael Littman, and Satinder Singh. Graphical models for game theory. In *Proceedings of the Conference on Uncertainty in Artificial Intelligence (UAI)*, 2001.

John Kemeny. Mathematics without numbers. In *Daedalus*, volume 88, pages 571–591. 1959.

Leonid Khachiyan. A polynomial algorithm in linear programming. *Soviet Math. Doklady*, 20:191–194, 1979.

Christopher Kiekintveld, Yevgeniy Vorobeychik, and Michael Wellman. An analysis of the 2004 supply chain management trading agent competition. In *IJCAI-05 Workshop on Trading Agent Design and Analysis*, Edinburgh, UK, 2005.

Donald E. Knuth, Christos H. Papadimitriou, and John N Tsitsiklis. A note on strategy elimination in bimatrix games. *Operations Research Letters*, 7(3):103–107, 1988.

R Kohli, R Krishnamurthi, and P Mirchandani. The minimum satisfiability problem. *SIAM Journal of Discrete Mathematics*, 7(2):275–283, 1994.

Daphne Koller and Avi Pfeffer. Representations and solutions for game-theoretic problems. *Artificial Intelligence*, 94(1):167–215, July 1997.

Norbert Korte and Rolf Mohring. An incremental linear-time algorithm for recognizing interval graphs. *SIAM Journal on Computing*, 18(1):68–81, February 1989.

Anshul Kothari, David Parkes, and Subhash Suri. Approximately-strategyproof and tractable multi-unit auctions. In *Proceedings of the ACM Conference on Electronic Commerce (ACM-EC)*, pages 166–175, San Diego, CA, 2003.

Sebastién Lahaie and David Parkes. Applying learning algorithms to preference elicitation. In *Proceedings of the ACM Conference on Electronic Commerce (ACM-EC)*, New York, NY, 2004.

Kate Larson and Tuomas Sandholm. Bargaining with limited computation: Deliberation equilibrium. *Artificial Intelligence*, 132(2):183–217, 2001. Short early version appeared in the Proceedings of the National Conference on Artificial Intelligence (AAAI), pp. 48–55, Austin, TX, 2000.

Kate Larson and Tuomas Sandholm. Costly valuation computation in auctions. In *Theoretical Aspects of Rationality and Knowledge (TARK VIII)*, pages 169–182, Siena, Italy, July 2001.

Kate Larson and Tuomas Sandholm. Mechanism design for deliberative agents. In *International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)*, Utrecht, The Netherlands, 2005. Early versions appeared as *Designing Auctions for Deliberative Agents* at AMEC-04, and *Strategic Deliberation and Truthful Revelation: An Impossibility Result* at ACM-EC-04 (short paper).

Ron Lavi, Ahuva Mu'Alem, and Noam Nisan. Towards a characterization of truthful combinatorial auctions. In *Proceedings of the Annual Symposium on Foundations of Computer Science (FOCS)*, pages 574–583, 2003.

Daniel Lehmann, Lidian Ita O'Callaghan, and Yoav Shoham. Truth revelation in rapid, approximately efficient combinatorial auctions. *Journal of the ACM*, 49(5):577–602, 2002. Early version appeared in ACMEC-99.

Carlton Lemke and J. Howson. Equilibrium points of bimatrix games. *Journal of the Society of Industrial and Applied Mathematics*, 12:413–423, 1964.

Kevin Leyton-Brown and Moshe Tennenholtz. Local-effect games. In *Proceedings of the Eighteenth International Joint Conference on Artificial Intelligence (IJCAI)*, Acapulco, Mexico, 2003.

Anton Likhodedov and Tuomas Sandholm. Auction mechanism for optimally trading off efficiency and revenue. In *Agent-Mediated Electronic Commerce (AMEC) workshop*, Melbourne, Australia, 2003. A short version also appeared in the ACM Conference on Electronic Commerce, 2003. The extension to multi-unit auctions has been accepted as a short paper in the ACM Conference on Electronic Commerce, 2004.

Anton Likhodedov and Tuomas Sandholm. Methods for boosting revenue in combinatorial auctions. In *Proceedings of the National Conference on Artificial Intelligence (AAAI)*, pages 232–237, San Jose, CA, 2004.

Anton Likhodedov and Tuomas Sandholm. Approximating revenue-maximizing combinatorial auctions. In *Proceedings of the National Conference on Artificial Intelligence (AAAI)*, Pittsburgh, PA, 2005.

Richard Lipton, Evangelos Markakis, Elchanan Mossel, and Amin Saberi. On approximately fair allocations of indivisible goods. In *Proceedings of the ACM Conference on Electronic Commerce (ACM-EC)*, pages 125–131, New York, NY, 2004.

William S. Lovejoy. Optimal mechanisms with finite agent types. *Management Science*, 53(5):788–803, 2006.

Leslie M. Marx and Jeroen M. Swinkels. Order independence for iterated weak dominance. *Games and Economic Behavior*, 18:219–245, 1997.

Leslie M. Marx and Jeroen M. Swinkels. Corrigendum, order independence for iterated weak dominance. *Games and Economic Behavior*, 31:324–329, 2000.

Andreu Mas-Colell, Michael Whinston, and Jerry R. Green. *Microeconomic Theory*. Oxford University Press, 1995.

Eric Maskin and John Riley. Optimal multi-unit auctions. In Frank Hahn, editor, *The Economics of Missing Markets, Information, and Games*, chapter 14, pages 312–335. Clarendon Press, Oxford, 1989.

Andrew McLennan and In-Uck Park. Generic 4x4 two person games have at most 15 Nash equilibria. *Games and Economic Behavior*, pages 26–1,111–130, 1999.

Andrew McLennan. The expected number of Nash equilibria of a normal form game. *Econometrica*, 1999.

Dov Monderer and Moshe Tennenholtz. Asymptotically optimal multi-object auctions for risk-averse agents. Technical report, Faculty of Industrial Engineering and Management, Technion, Haifa, Israel, February 1999.

Hervé Moulin. Serial cost-sharing of excludable public goods. *Review of Economic Studies*, 61:305–325, 1994.

Ahuva Mu'alem and Noam Nisan. Truthful approximate mechanisms for restricted combinatorial auctions. In *Proceedings of the National Conference on Artificial Intelligence (AAAI)*, pages 379–384, Edmonton, Canada, July 2002.

Roger Myerson and Mark Satterthwaite. Efficient mechanisms for bilateral trading. *Journal of Economic Theory*, 28:265–281, 1983.

Roger Myerson. Incentive compatibility and the bargaining problem. *Econometrica*, 41(1), 1979.

Roger Myerson. Optimal auction design. *Mathematics of Operation Research*, 6:58–73, 1981.

Roger Myerson. *Game Theory: Analysis of Conflict*. Harvard University Press, Cambridge, 1991.

John Nash. Equilibrium points in n-person games. *Proc. of the National Academy of Sciences*, 36:48–49, 1950.

George Nemhauser and Laurence Wolsey. *Integer and Combinatorial Optimization*. John Wiley & Sons, 1999. Section 4, page 11.

Noam Nisan and Amir Ronen. Computationally feasible VCG mechanisms. In *Proceedings of the ACM Conference on Electronic Commerce (ACM-EC)*, pages 242–252, Minneapolis, MN, 2000.

Noam Nisan and Amir Ronen. Algorithmic mechanism design. *Games and Economic Behavior*, 35:166–196, 2001. Early version in STOC-99.

Noam Nisan and Ilya Segal. The communication requirements of efficient allocations and supporting prices. *Journal of Economic Theory*, 2005. Forthcoming.

Noam Nisan. Bidding and allocation in combinatorial auctions. In *Proceedings of the ACM Conference on Electronic Commerce (ACM-EC)*, pages 1–12, Minneapolis, MN, 2000.

Robert Nozick. Newcomb's problem and two principles of choice. In Nicholas Rescher et al., editor, *Essays in Honor of Carl G. Hempel*, pages 114–146. Synthese Library (Dordrecht, the Netherlands: D. Reidel), 1969.

Eugene Nudelman, Jennifer Wortman, Kevin Leyton-Brown, and Yoav Shoham. Run the GAMUT: A comprehensive approach to evaluating game-theoretic algorithms. In *International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)*, New York, NY, USA, 2004.

Naoki Ohta, Atsushi Iwasaki, Makoto Yokoo, Kohki Maruono, Vincent Conitzer, and Tuomas Sandholm. A compact representation scheme for coalitional games in open anonymous environments. In *Proceedings of the National Conference on Artificial Intelligence (AAAI)*, Boston, MA, 2006.

Martin J Osborne and Ariel Rubinstein. *A Course in Game Theory*. MIT Press, 1994.

Christos Papadimitriou and Tim Roughgarden. Equilibria in symmetric games. 2003. Available at http://www.cs.berkeley.edu/~ christos/papers/sym.ps.

Christos Papadimitriou. Games against nature. *Journal of Computer and System Sciences*, 31:288–301, 1985.

Christos Papadimitriou. NP-completeness: A retrospective. In *Proceedings of the International Conference on Automata, Languages, and Programming (ICALP)*, 1997.

Christos Papadimitriou. Algorithms, games and the Internet. In *Proceedings of the Annual Symposium on Theory of Computing (STOC)*, pages 749–753, 2001.

David Parkes and Grant Schoenebeck. GROWRANGE: Anytime VCG-based mechanisms. In *Proceedings of the National Conference on Artificial Intelligence (AAAI)*, pages 34–41, San Jose, CA, 2004.

David Parkes and Jeffrey Shneidman. Distributed implementations of generalized Vickrey-Clarke-Groves auctions. In *International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)*, pages 261–268, New York, NY, USA, 2004.

David Parkes, Jayant Kalagnanam, and Marta Eso. Achieving budget-balance with Vickrey-based payment schemes in exchanges. In *Proceedings of the Seventeenth International Joint Conference on Artificial Intelligence (IJCAI)*, pages 1161–1168, Seattle, WA, 2001.

David Parkes, Ruggiero Cavallo, Nick Elprin, Adam Juda, Sebastien Lahaie, Benjamin Lubin, Loizos Michael, Jeffrey Shneidman, and Hassan Sultan. ICE: An iterative combinatorial exchange. In *Proceedings of the ACM Conference on Electronic Commerce (ACM-EC)*, Vancouver, Canada, 2005.

David Parkes. iBundle: An efficient ascending price bundle auction. In *Proceedings of the ACM Conference on Electronic Commerce (ACM-EC)*, pages 148–157, Denver, CO, November 1999.

David Parkes. Optimal auction design for agents with hard valuation problems. In *Agent-Mediated Electronic Commerce Workshop at the International Joint Conference on Artificial Intelligence*, Stockholm, Sweden, 1999.

David G. Pearce. Rationalizable strategic behavior and the problem of perfection. *Econometrica*, 52:1029–1050, 1984.

Michal Penn and Moshe Tennenholtz. Constrained multi-object auctions and b-matching. *Information Processing Letters*, 75(1–2):29–34, July 2000.

Adrian Petcu, Boi Faltings, and David Parkes. Mdpop: Faithful distributed implementation of efficient social choice problems. In *International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)*, Hakodate, Japan, 2006.

Steve Phelps, Peter McBurnley, Simon Parsons, and Elizabeth Sklar. Co-evolutionary auction mechanism design. *Lecture Notes in AI*, 2531, 2002.

M. S. Pini, F. Rossi, K. B. Venable, and T. Walsh. Aggregating partially ordered preferences: possibility and impossibility results. In *Theoretical Aspects of Rationality and Knowledge (TARK)*, Singapore, 2005.

Ryan Porter, Amir Ronen, Yoav Shoham, and Moshe Tennenholtz. Mechanism design with execution uncertainty. In *Proceedings of the 18th Annual Conference on Uncertainty in Artificial Intelligence (UAI)*, Edmonton, Canada, 2002.

Ryan Porter, Eugene Nudelman, and Yoav Shoham. Simple search methods for finding a Nash equilibrium. In *Proceedings of the National Conference on Artificial Intelligence (AAAI)*, pages 664–669, San Jose, CA, 2004.

Ryan Porter. Mechanism design for online real-time scheduling. In *Proceedings of the ACM Conference on Electronic Commerce (ACM-EC)*, pages 61–70, New York, NY, 2004.

Ariel D. Procaccia and Jeffrey S. Rosenschein. Junta distributions and the average-case complexity of manipulating elections. In *International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)*, pages 497–504, Hakodate, Japan, 2006.

F. Rossi, M. S. Pini, K. B. Venable, and T. Walsh. Strategic voting when aggregating partially ordered preferences. In *International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)*, pages 685–687, Hakodate, Japan, 2006.

J. Rothe, H. Spakowski, and J. Vogel. Exact complexity of the winner problem for Young elections. In *Theory of Computing Systems*, volume 36(4), pages 375–386. Springer-Verlag, 2003.

Michael Rothkopf, Thomas Teisberg, and Edward Kahn. Why are Vickrey auctions rare? *Journal of Political Economy*, 98(1):94–109, 1990.

Michael Rothkopf, Aleksandar Pekeč, and Ronald Harstad. Computationally manageable combinatorial auctions. *Management Science*, 44(8):1131–1147, 1998.

Stuart Russell and Peter Norvig. *Artificial Intelligence: A Modern Approach*. Prentice Hall, 2nd edition, 2003.

Tuomas Sandholm and Andrew Gilpin. Sequences of take-it-or-leave-it offers: Near-optimal auctions without full valuation revelation. In *International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)*, pages 1127–1134, Hakodate, Japan, 2006.

Tuomas Sandholm and Victor R Lesser. Issues in automated negotiation and electronic commerce: Extending the contract net framework. In *Proceedings of the First International Conference on Multi-Agent Systems (ICMAS)*, pages 328–335, San Francisco, CA, June 1995. Reprinted in *Readings in Agents*, Huhns and Singh, eds., pp. 66–73, 1997.

Tuomas Sandholm and Victor R Lesser. Coalitions among computationally bounded agents. *Artificial Intelligence*, 94(1):99–137, 1997. Special issue on Economic Principles of Multiagent Systems. Early version appeared at the International Joint Conference on Artificial Intelligence (IJCAI), pages 662–669, 1995.

Tuomas Sandholm and Victor Lesser. Leveled commitment contracting: A backtracking instrument for multiagent systems. *AI Magazine*, 23(3):89–100, 2002.

Tuomas Sandholm and Subhash Suri. BOB: Improved winner determination in combinatorial auctions and generalizations. *Artificial Intelligence*, 145:33–58, 2003. Early version: Improved Algorithms for Optimal Winner Determination in Combinatorial Auctions and Generalizations. National Conference on Artificial Intelligence (AAAI-00), pp. 90–97, Austin, TX, July 31 – August 2.

Tuomas Sandholm, Subhash Suri, Andrew Gilpin, and David Levine. Winner determination in combinatorial auction generalizations. In *International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)*, pages 69–76, Bologna, Italy, July 2002. Early version appeared at the AGENTS-01 Workshop on Agent-Based Approaches to B2B, pp. 35–41, Montreal, Canada, May 2001.

Tuomas Sandholm, Vincent Conitzer, and Craig Boutilier. Automated design of multistage mechanisms. In *First International Workshop on Incentive Based Computing, at the IEEE / WIC / ACM International Conference on Web Intelligence (WI)*, Compiegne, France, 2005.

Tuomas Sandholm, Andrew Gilpin, and Vincent Conitzer. Mixed-integer programming methods for finding Nash equilibria. In *Proceedings of the National Conference on Artificial Intelligence (AAAI)*, pages 495–501, Pittsburgh, PA, 2005.

Tuomas Sandholm, Subhash Suri, Andrew Gilpin, and David Levine. CABOB: A fast optimal algorithm for winner determination in combinatorial auctions. *Management Science*, 51(3):374–390, 2005. Special issue on Electronic Markets. Early version in IJCAI-01.

Tuomas Sandholm, David Levine, Michael Concordia, Paul Martyn, Rick Hughes, Jim Jacobs, and Dennis Begg. Changing the game in strategic sourcing at Procter & Gamble: Expressive competition enabled by optimization. *Interfaces*, 36(1):55–68, 2006. Edelman award competition finalist writeup.

Tuomas Sandholm. An implementation of the contract net protocol based on marginal cost calculations. In *Proceedings of the National Conference on Artificial Intelligence (AAAI)*, pages 256–262, Washington, D.C., July 1993.

Tuomas Sandholm. An implementation of the contract net protocol based on marginal cost calculations. In *Proceedings of the National Conference on Artificial Intelligence (AAAI)*, pages 256–262, Washington, D.C., 1993.

Tuomas Sandholm. Necessary and sufficient contract types for optimal task allocation. In *Proceedings of the Fifteenth International Joint Conference on Artificial Intelligence (IJCAI)*, page 87, Nagoya, Japan, 1997. Poster session abstracts.

Tuomas Sandholm. Issues in computational Vickrey auctions. *International Journal of Electronic Commerce*, 4(3):107–129, 2000. Special Issue on Applying Intelligent Agents for Electronic Commerce. A short, early version appeared at the Second International Conference on Multi–Agent Systems (ICMAS), pages 299–306, 1996.

Tuomas Sandholm. Algorithm for optimal winner determination in combinatorial auctions. *Artificial Intelligence*, 135:1–54, January 2002. First appeared as an invited talk at the First International Conference on Information and Computation Economies, Charleston, SC, Oct. 25–28, 1998. Extended version appeared as Washington Univ., Dept. of Computer Science, tech report WUCS-99-01, January 28th, 1999. Conference version appeared at the International Joint Conference on Artificial Intelligence (IJCAI), pp. 542–547, Stockholm, Sweden, 1999.

Tuomas Sandholm. eMediator: A next generation electronic commerce server. *Computational Intelligence*, 18(4):656–676, 2002. Special issue on Agent Technology for Electronic Commerce. Early versions appeared in the Conference on Autonomous Agents (AGENTS-00), pp. 73–96, 2000; AAAI-99 Workshop on AI in Electronic Commerce, Orlando, FL, pp. 46–55, July 1999; and as a Washington University, St. Louis, Dept. of Computer Science technical report WU-CS-99-02, Jan. 1999.

Tuomas Sandholm. Expressive commerce and its application to sourcing. In *Conference on Innovative Applications of Artificial Intelligence*, Boston, MA, July 2006.

Paolo Santi, Vincent Conitzer, and Tuomas Sandholm. Towards a characterization of polynomial preference elicitation with value queries in combinatorial auctions. In *Conference on Learning Theory (COLT)*, pages 1–16, Banff, Alberta, Canada, 2004.

Mark Satterthwaite. Strategy-proofness and Arrow's conditions: existence and correspondence theorems for voting procedures and social welfare functions. *Journal of Economic Theory*, 10:187–217, 1975.

Rahul Savani and Bernhard von Stengel. Exponentially many steps for finding a Nash equilibrium in a bimatrix game. In *Proceedings of the Annual Symposium on Foundations of Computer Science (FOCS)*, pages 258–267, 2004.

Grant Schoenebeck and Salil Vadhan. The computational complexity of Nash equilibria in concisely represented games. In *Proceedings of the ACM Conference on Electronic Commerce (ACM-EC)*, pages 270–279, Ann Arbor, MI, 2006.

Jiefu Shi and Michael Littman. Abstraction methods for game theoretic poker. In *Computers and Games*, pages 333–345. Springer-Verlag, 2001.

John Tagliabue. Global AIDS Funds Is Given Attention, but Not Money. *The New York Times*, 2003. Reprinted on http://www.healthgap.org/press_releases/a03/060103_NYT_HGAP_G8_fund.html.

Moshe Tennenholtz. Some tractable combinatorial auctions. In *Proceedings of the National Conference on Artificial Intelligence (AAAI)*, Austin, TX, August 2000.

Leslie Valiant. The complexity of computing the permanent. *Theoretical Computer Science*, 8:189–201, 1979.

Stan van Hoesel and Rudolf Müller. Optimization in electronic marketplaces: Examples from combinatorial auctions. *Netnomics*, 3(1):23–33, June 2001.

William Vickrey. Counterspeculation, auctions, and competitive sealed tenders. *Journal of Finance*, 16:8–37, 1961.

Rakesh Vohra. Research problems in combinatorial auctions. Mimeo, version Oct. 29, 2001.

John von Neumann and Oskar Morgenstern. *Theory of games and economic behavior*. Princeton University Press, 1947.

John von Neumann. Zur Theorie der Gesellschaftsspiele. *Mathematische Annalen*, 100:295–320, 1927.

Yevgeniy Vorobeychik, Christopher Kiekintveld, and Michael Wellman. Empirical mechanism design: Methods, with application to a supply chain scenario. In *Proceedings of the ACM Conference on Electronic Commerce (ACM-EC)*, Ann Arbor, MI, 2006.

Peter Wurman and Michael Wellman. AkBA: A progressive, anonymous-price combinatorial auction. In *Proceedings of the ACM Conference on Electronic Commerce (ACM-EC)*, pages 21–29, Minneapolis, MN, October 2000.

Makoto Yokoo, Yuko Sakurai, and Shigeo Matsubara. Robust combinatorial auction protocol against false-name bids. *Artificial Intelligence*, 130(2), 2004.

Makoto Yokoo, Vincent Conitzer, Tuomas Sandholm, Naoki Ohta, and Atsushi Iwasaki. Coalitional games in open anonymous environments. In *Proceedings of the National Conference on Artificial Intelligence (AAAI)*, pages 509–514, Pittsburgh, PA, 2005.

Makoto Yokoo. The characterization of strategy/false-name proof combinatorial auction protocols: Price-oriented, rationing-free protocol. In *Proceedings of the Eighteenth International Joint Conference on Artificial Intelligence (IJCAI)*, pages 733–742, Acapulco, Mexico, August 2003.

Peyton Young. Optimal voting rules. *Journal of Economic Perspectives*, 9(1):51–64, 1995.

Martin Zinkevich, Avrim Blum, and Tuomas Sandholm. On polynomial-time preference elicitation with value queries. In *Proceedings of the ACM Conference on Electronic Commerce (ACM-EC)*, pages 176–185, San Diego, CA, 2003.

Edo Zurel and Noam Nisan. An efficient approximate allocation algorithm for combinatorial auctions. In *Proceedings of the ACM Conference on Electronic Commerce (ACM-EC)*, pages 125–136, Tampa, FL, 2001.