Stanford

Yoav Shoham

Professor of Computer Science, Emeritus

CONTACT INFORMATION

- **Administrator**

  Alex Sandra Pinedo - Administrative Associate

  Email asandra@cs.stanford.edu

  Tel (650) 721-6625

Bio

BIO

Yoav Shoham is professor emeritus of computer science at Stanford University. A leading AI expert, Prof. Shoham is Fellow of AAAI, ACM and the Game Theory Society. Among his awards are the IJCAI Research Excellence Award, the AAAI/ACM Allen Newell Award, and the ACM/SIGAI Autonomous Agents Research Award. His online Game Theory course has been watched by close to a million people. Prof. Shoham has founded several AI companies, including TradingDynamics (acquired by Ariba), Katango and Timeful (both acquired by Google), and AI21 Labs. Prof. Shoham also chairs the AI Index initiative (www.AIindex.org), which tracks global AI activity and progress, and WeCode (www.wecode.org.il), a nonprofit initiative to train high-quality programmers from disadvantaged populations.

ACADEMIC APPOINTMENTS

- Emeritus Faculty, Acad Council, Computer Science

HONORS AND AWARDS

- Research Excellence Award, IJCAI (2019)
- Fellow, Game Theory Society (2018)
- Feigenbaum Prize, AAAI (2017)
- Allen Newell Award, AAAI/ACM (2013)
- Fellow, ACM (2013)
- Influential Paper Award, AAMAS (2011)
- Best Paper Award, ACM Conference on Electronic Commerce (2010)
- Best Paper Award, ACM Conference on Electronic Commerce (2009)
- Autonomous Agents Research Award, ACM/SIGART (2008)
- Charter member of the Game Theory Society, International Game Theory Society (2008)
- Fellow, Association for the Advancement of Artificial Intelligence (2002)

PROGRAM AFFILIATIONS

- Symbolic Systems Program

PROFESSIONAL EDUCATION

- PhD, Yale (1986)

Publications

PUBLICATIONS

- **On equilibria in games with imperfect recall** *GAMES AND ECONOMIC BEHAVIOR*
  Lambert, N. S., Marple, A., Shoham, Y.
  2019; 113: 164–85

- **Toward the AI Index** *AI MAGAZINE*
  Shoham, Y.
  2017; 38 (4): 71–77

- **Why Knowledge Representation Matters** *COMMUNICATIONS OF THE ACM*
  Shoham, Y.
  2016; 59 (1): 47–49

- **Communication** *MULTIAGENT SYSTEMS: ALGORITHMIC, GAME-THEORETIC, AND LOGICAL FOUNDATIONS*
  Shoham, Y., Leyton-Brown, K., Shoham, Y., LeytonBrown, K.
  2009: 223–39

- **If Multi-Agent Learning is the Answer, What is the Question?** *Artificial Intelligence, special issue on Foundations of Multi-Agent Learning*
  Shoham, Y., Powers, R.
  edited by Vohra, R., Wellman, M.
  : 365–377

- **Empirical Hardness Models for Combinatorial Auctions.** *Chapter 20 of Combinatorial Auctions.*
  Leyton-Brown, K., Nudelman, E.

- **A Test Suite for Combinatorial Auctions.** *Chapter 19 of Combinatorial Auctions.*
  Leyton-Brown, K., Shoham, Y.

- **Introduction to Combinatorial Auctions.** *Introductory chapter of Combinatorial Auctions.*
  Cramton, P., Shoham, Y.

- **Marginal Contribution Nets: A Compact Representation Scheme for Coalitional Games.**
  Ieong, S., Shoham, Y.

- **Game Theory Pragmatics: A Challenge for AI.**
  Shoham, Y.

- **Success, Strategy and Skill: an Experimental Study.**
  Archibald, C., Altman, A., Shoham, Y.

- **Multi-Attribute Coalitional Games.**
  Ieong, S., Shoham, Y.

- **Learning in Games with More than Two Players.**
  Vu, T., Powers, R., Shoham, Y.

- **Can Computers Think? Can they Feel?** *Non-technical. Stanford School of Engineering "Ask the Expert" column.*
  Shoham, Y.

- **Optimal Testing of Structured Knowledge.**
  Munie, M., Shoham, Y.

- **Asymptotically Optimal Repeated Auctions for Sponsored Search.**
  Lambert, N., Shoham, Y.

- **Internal Implementation.**
  Anderson, A., Shoham, Y. , Altman, A.

- **Dispersion Games** *AAAI-02.*
  Grenager, T., Powers, R., Shoham, Y.

- **Run the GAMUT: A Comprehensive Approach to Evaluating Game-Theoretic Algorithms.**
  Leyton-Brown, K., Nudelman, E., Wortman, J., Shoham, Y.

- **On the Agenda Control Problem in Knockout Tournaments.**
  Vu, T., Altman, A., Shoham., Y.

- **Modeling Billiards Games.**
  Archibald, C., Shoham, Y.

- **Bayesian Coalitional Games.**
  Ieong, S., Shoham, Y.

- **Near-Optimal Search in Continuous Domains.**
  Ieong, S., Lambert, N., Shoham, Y., Brafman, R.

- **Eliciting Properties of Probability Distributions.**
  Lambert, N., Pennock, D., M., Shoham, Y.

- **Broadening the Scope of Optimal Seeding Analysis in Knockout Tournaments.**
  Vu, T.

- **Rational Programming** *Unpublished.*
  Shoham, Y.

- **Joint Process Games: From Ratings to Wikis.**
  Munie, M., Shoham, Y.

- **Higher Educated Guesses.**
  Shoham, Y.

- **On the Complexity of Schedule Control Problems for Knockout Tournaments.**
  Vu, T., Altman, A., Shoham, Y.

- **A Framework for the Quantitative Evaluation of Voting Rules.**
  Munie, M., Tang, P., Shoham, Y.

- **Team Competition.**
  Tang, P., Shoham, Y. , Lin, F.

- **A Distributed Agent for Computational Pool** *IEEE TRANSACTIONS ON COMPUTATIONAL INTELLIGENCE AND AI IN GAMES*
  Archibald, C., Altman, A., Shoham, Y.
  2016; 8 (2): 190-202

- **An axiomatic characterization of wagering mechanisms** *JOURNAL OF ECONOMIC THEORY*
  Lambert, N. S., Langford, J., Vaughan, J. W., Chen, Y., Reeves, D. M., Shoham, Y., Pennock, D. M.
  2015; 156: 389-416

- **Fair Seeding in Knockout Tournaments** *ACM TRANSACTIONS ON INTELLIGENT SYSTEMS AND TECHNOLOGY*
  Thuc Vu, T., Shoham, Y.

2012; 3 (1)

- **Designing competitions between teams of individuals** *ARTIFICIAL INTELLIGENCE*
  Tang, P., Shoham, Y., Lin, F.
  2010; 174 (11): 749-766

- **Computational Pool: A New Challenge for Game Theory Pragmatics** *AI MAGAZINE*
  Archibald, C., Altman, A., Greenspan, M., Shoham, Y.
  2010; 31 (4): 33-41

- **Multi-Agent Learning II: Algorithms.** *Encyclopedia of Machine Learning*
  Shoham, Y., Powers, R.
  edited by Sammut, C., Webb, G.
  Springer.2010

- **Multi-Agent Learning I: Problem Definition.** *Encyclopedia of Machine Learning*
  Shoham, Y., Powers, R.
  edited by Sammut, C., Webb, G.
  Springer.2010

- **Cause for Celebration, Cause for Concern.** *Heuristics, Probability and Causality: a Tribute to Judea Pearl*
  Shoham, Y.
  edited by Dechter, R., Geffner, H., Halpern, J., Y.
  College Publications.2010

- **Untitled.** *Epistemic Logic: 5 Questions*
  Shoham, Y.
  edited by Hendricks, V., F., Roy, O.
  Automatic Press / VIP.2010

- **Joint Revision of Belief and Intention.**
  Icard, T., Pacuit, E., Shoham, Y.
  2010

- **Logical Theories of Intention and the Database Perspective** *JOURNAL OF PHILOSOPHICAL LOGIC*
  Shoham, Y.
  2009; 38 (6): 633-647

- **Empirical Hardness Models: Methodology and a Case Study on Combinatorial Auctions** *JOURNAL OF THE ACM*
  Leyton-Brown, K., Nudelman, E., Shoham, Y.
  2009; 56 (4)

- **Ranking games** *ARTIFICIAL INTELLIGENCE*
  Brandt, F., Fischer, F., Harrenstein, P., Shoham, Y.
  2009; 173 (2): 221-239

- **Analysis of a Winning Computational Billiards Player** *21st International Joint Conference on Artificial Intelligence (IJCAI-09)*
  Archibald, C., Altman, A., Shoham, Y.
  IJCAI-INT JOINT CONF ARTIF INTELL.2009: 1377–1382

- **Introduction to Noncooperative Game Theory: Games in Normal Form** *MULTIAGENT SYSTEMS: ALGORITHMIC, GAME-THEORETIC, AND LOGICAL FOUNDATIONS*
  Shoham, Y., Leyton-Brown, K., Shoham, Y., LeytonBrown, K.
  2009: 47–86

- **Distributed Constraint Satisfaction** *MULTIAGENT SYSTEMS: ALGORITHMIC, GAME-THEORETIC, AND LOGICAL FOUNDATIONS*
  Shoham, Y., Leyton-Brown, K., Shoham, Y., LeytonBrown, K.
  2009: 1–17

- **Probability Theory** *MULTIAGENT SYSTEMS: ALGORITHMIC, GAME-THEORETIC, AND LOGICAL FOUNDATIONS*

Shoham, Y., Leyton-Brown, K., Shoham, Y., LeytonBrown, K.

2009: 449–50

- **Linear and Integer Programming** *MULTIAGENT SYSTEMS: ALGORITHMIC, GAME-THEORETIC, AND LOGICAL FOUNDATIONS*
  Shoham, Y., Leyton-Brown, K., Shoham, Y., LeytonBrown, K.
  2009: 451–54

- **Classical Logic** *MULTIAGENT SYSTEMS: ALGORITHMIC, GAME-THEORETIC, AND LOGICAL FOUNDATIONS*
  Shoham, Y., Leyton-Brown, K., Shoham, Y., LeytonBrown, K.
  2009: 457–58

- **Computing Solution Concepts of Normal-Form Games** *MULTIAGENT SYSTEMS: ALGORITHMIC, GAME-THEORETIC, AND LOGICAL FOUNDATIONS*
  Shoham, Y., Leyton-Brown, K., Shoham, Y., LeytonBrown, K.
  2009: 87–112

- **Distributed Optimization** *MULTIAGENT SYSTEMS: ALGORITHMIC, GAME-THEORETIC, AND LOGICAL FOUNDATIONS*
  Shoham, Y., Leyton-Brown, K., Shoham, Y., LeytonBrown, K.
  2009: 19–45

- **Protocols for Multiagent Resource Allocation: Auctions** *MULTIAGENT SYSTEMS: ALGORITHMIC, GAME-THEORETIC, AND LOGICAL FOUNDATIONS*
  Shoham, Y., Leyton-Brown, K., Shoham, Y., LeytonBrown, K.
  2009: 315–65

- **Teams of Selfish Agents: An Introduction to Coalitional Game Theory** *MULTIAGENT SYSTEMS: ALGORITHMIC, GAME-THEORETIC, AND LOGICAL FOUNDATIONS*
  Shoham, Y., Leyton-Brown, K., Shoham, Y., LeytonBrown, K.
  2009: 367–91

- **Richer Representations: Beyond the Normal and Extensive Forms** *MULTIAGENT SYSTEMS: ALGORITHMIC, GAME-THEORETIC, AND LOGICAL FOUNDATIONS*
  Shoham, Y., Leyton-Brown, K., Shoham, Y., LeytonBrown, K.
  2009: 141–88

- **Protocols for Strategic Agents: Mechanism Design** *MULTIAGENT SYSTEMS: ALGORITHMIC, GAME-THEORETIC, AND LOGICAL FOUNDATIONS*
  Shoham, Y., Leyton-Brown, K., Shoham, Y., LeytonBrown, K.
  2009: 261–313

- **Aggregating Preferences: Social Choice** *MULTIAGENT SYSTEMS: ALGORITHMIC, GAME-THEORETIC, AND LOGICAL FOUNDATIONS*
  Shoham, Y., Leyton-Brown, K., Shoham, Y., LeytonBrown, K.
  2009: 241–59

- **Logics of Knowledge and Belief** *MULTIAGENT SYSTEMS: ALGORITHMIC, GAME-THEORETIC, AND LOGICAL FOUNDATIONS*
  Shoham, Y., Leyton-Brown, K., Shoham, Y., LeytonBrown, K.
  2009: 393–419

- **Beyond Belief: Probability, Dynamics, and Intention** *MULTIAGENT SYSTEMS: ALGORITHMIC, GAME-THEORETIC, AND LOGICAL FOUNDATIONS*
  Shoham, Y., Leyton-Brown, K., Shoham, Y., LeytonBrown, K.
  2009: 421–46

- **Multiagent Systems Algorithmic, Game-Theoretic, and Logical Foundations Introduction** *MULTIAGENT SYSTEMS: ALGORITHMIC, GAME-THEORETIC, AND LOGICAL FOUNDATIONS*
  Shoham, Y., Leyton-Brown, K., Shoham, Y., LeytonBrown, K.
  2009: XVII-+

- **Games with Sequential Actions: Reasoning and Computing with the Extensive Form** *MULTIAGENT SYSTEMS: ALGORITHMIC, GAME-THEORETIC, AND LOGICAL FOUNDATIONS*
  Shoham, Y., Leyton-Brown, K., Shoham, Y., LeytonBrown, K.
  2009: 113–39

- **Learning and Teaching** *MULTIAGENT SYSTEMS: ALGORITHMIC, GAME-THEORETIC, AND LOGICAL FOUNDATIONS*
  Shoham, Y., Leyton-Brown, K., Shoham, Y., LeytonBrown, K.

2009: 189–222

- **Markov Decision Problems (MDPs)** *MULTIAGENT SYSTEMS: ALGORITHMIC, GAME-THEORETIC, AND LOGICAL FOUNDATIONS*
  Shoham, Y., Leyton-Brown, K., Shoham, Y., LeytonBrown, K.
  2009: 455–56

- **Multiagent Systems: Algorithmic, Game Theoretic and Logical Foundation**
  Shoham, Y., Leyton-Brown, K.
  Cambridge University Press.2009

- **Eliciting Truthful Answers to Multiple-Choice Questions Preliminary Report** *10th ACM Conference on Electronic Commerce (EC-2009)*
  Lambert, N., Shoham, Y.
  ASSOC COMPUTING MACHINERY.2009: 109–118

- **Eliciting Properties of Probability Distributions: The Highlights** *SI GECOM EXCHANGES*
  Lambert, N., Pennock, D. M., Shoham, Y.
  2008; 7 (3)

- **Fault tolerant mechanism design** *ARTIFICIAL INTELLIGENCE*
  Porter, R., Ronen, A., Shoham, Y., Tennenholtz, M.
  2008; 172 (15): 1783-1799

- **Computer science and game theory** *COMMUNICATIONS OF THE ACM*
  Shoham, Y.
  2008; 51 (8): 74-79

- **Simple search methods for finding a Nash equilibrium** *2nd World Congress of the Game-Theory-Society*
  Porter, R., Nudelman, E., Shoham, Y.
  ACADEMIC PRESS INC ELSEVIER SCIENCE.2008: 642–62

- **Self-Financed Wagering Mechanisms for Forecasting** *ACM Conference on Electronic Commerce*
  Lambert, N., Langford, J., Wortman, J., Chen, Y., Reeves, D., Shoham, Y., Pennock, D. M.
  ASSOC COMPUTING MACHINERY.2008: 170–179

- **Mechanism Design with Execution Uncertainty** *UAI-02.*
  Porter, R., Ronen, A., Shoham, Y., Tennenholtz, M.
  2008

- **Essentials of Game Theory: A Concise, Multidisciplinary Introduction**
  Leyton-Brown, K., Shoham, Y.
  Morgan Claypool Publishers.2008

- **Eliciting Properties of Probability Distributions** *ACM Conference on Electronic Commerce*
  Lambert, N., Pennock, D. M., Shoham, Y.
  ASSOC COMPUTING MACHINERY.2008: 129–138

- **Truthful Surveys** *4th International Workshop on Internet and Network Economics*
  Lambert, N., Shoham, Y.
  SPRINGER-VERLAG BERLIN.2008: 154–165

- **A general criterion and an algorithmic framework for learning in multi-agent systems** *MACHINE LEARNING*
  Powers, R., Shoham, Y., Vu, T.
  2007; 67 (1-2): 45-76

- **If multi-agent learning is the answer, what is the question?** *ARTIFICIAL INTELLIGENCE*
  Shoham, Y., Powers, R., Grenager, T.
  2007; 171 (7): 365-377

- **The Israeli-Palestinian Science Organization** *SCIENCE*
  Wiesel, T., Agre, P., Arrow, K. J., Atiyah, M., Brezin, E., Charfi, F. F., Cohen-Tannoudji, C., Daar, A., Jacob, F., Kahneman, D., Lee, Y. T., Nicolaisen, I., Nusseibeh, et al

2007; 315 (5808): 39-39

- **Spiteful Bidding in Sealed-Bid Auctions** *20th International Joint Conference on Artificial Intelligence*
  Brandt, F., Sandholm, T., Shoham, Y.
  IJCAI-INT JOINT CONF ARTIF INTELL.2007: 1207–1214

- **A Game-Theoretic Analysis of Strictly Competitive Multiagent Scenarios** *20th International Joint Conference on Artificial Intelligence*
  Brandt, F., Fischer, F., Harrenstein, P., Shoham, Y.
  IJCAI-INT JOINT CONF ARTIF INTELL.2007: 1199–1206

- **On strictly competitive multi-player games.**
  Brandt, F., Fischer, F.
  2006

- **Combinatorial Auctions**
  edited by Cramton, P., Shoham, Y., Steinberg, R.
  MIT Press.2006

- **Non-cooperative computation: Boolean functions with correctness and exclusivity** *THEORETICAL COMPUTER SCIENCE*
  Shoham, Y., Tennenholtz, M.
  2005; 343 (1-2): 97-113

- **On cheating in sealed-bid auctions** *4th ACM Conference on Electronics Commerce (EC'03)*
  Porter, R., Shoham, Y.
  ELSEVIER SCIENCE BV.2005: 41–54

- **Learning against opponents with bounded memory** *19th International Joint Conference on Artificial Intelligence (IJCAI 05)*
  Powers, R., Shoham, Y.
  IJCAI-INT JOINT CONF ARTIF INTELL.2005: 817–822

- **Fast and Compact: A Simple Class of Congestion Games** *AAAI-2005.*
  Ieong, S., McGrew, R., Nudelman, E., Shoham, Y.
  2005

- **New Criteria and a New Algorithm for Learning in Multi-Agent Systems.**
  Powers, R., Shoham, Y.
  2005

- **The structural basis of the thermostability of SP1, a novel plant (Populus tremula) boiling stable protein** *JOURNAL OF BIOLOGICAL CHEMISTRY*
  Dgany, O., Gonzalez, A., Sofer, O., Wang, W. X., Zolotnitsky, G., Wolf, A., Shoham, Y., Altman, A., Wolf, S. G., Shoseyov, O., Almog, O.
  2004; 279 (49): 51516-51523

- **Fair imposition** *JOURNAL OF ECONOMIC THEORY*
  Porter, R., Shoham, Y., Tennenholtz, M.
  2004; 118 (2): 209-228

- **Using contracts to influence the outcome of a game** *19th National Conference on Artificial Intelligence/16th Conference on Innovative Applications of Artificial Intelligence*
  McGrew, R., Shoham, Y.
  ASSOC ADVANCEMENT ARTIFICIAL INTELLIGENCE.2004: 238–243

- **Addressing the Free-Rider Problem in File-Sharing Systems: A Mechanism-Design Approach**
  McGrew, R., Shoham, Y.
  2004

- **SATzilla: An Algorithm Portfolio for SAT** *In conjunction with SAT 2004.*
  Nudelman, E., Devkar, A., Shoham, Y., Leyton-Brown, K., Hoos, H.
  2004

- **Simple search methods for finding a Nash equilibrium** *19th National Conference on Artificial Intelligence/16th Conference on Innovative Applications of Artificial Intelligence*

Porter, R., Nudelman, E., Shoham, Y.
ASSOC ADVANCEMENT ARTIFICIAL INTELLIGENCE.2004: 664–669

- **Understanding random SAT: Beyond the clauses-to-variables ratio** *10th International Conference on the Principles and Practice of Constraint Programming*
  Nudelman, E., Leyton-Brown, K., Hoos, H. H., Devkar, A., Shoham, Y.
  SPRINGER-VERLAG BERLIN.2004: 438–452

- **Incentive mechanisms for smoothing out a focused demand for network resources** *COMPUTER COMMUNICATIONS*
  Leyton-Brown, K., Porter, R., Prabhakar, B., Shoham, Y., Venkataraman, S.
  2003; 26 (3): 237-250

- **Boosting as a metaphor for algorithm design** *9th International Conference on Principles and Practice of Constraint Programming*
  Leyton-Brown, K., Nudelman, E., Andrew, G., McFadden, J., Shoham, Y.
  SPRINGER-VERLAG BERLIN.2003: 899–903

- **Towards a General Theory of Non-Cooperative Computing.**
  McGrew, R., Porter, R., Shoham, Y.
  2003

- **On Cheating in Sealed-Bid Auctions.**
  Porter, R., Shoham, Y.
  2003

- **Truth revelation in approximately efficient combinatorial auctions** *JOURNAL OF THE ACM*
  Lehmann, D., O'Callaghan, L. I., Shoham, Y.
  2002; 49 (5): 577-602

- **Dispersion games: General definitions and some specific learning results** *18th National Conference on Artificial Intelligence/14th Conference on Innovative Applications of Artificial Intelligence*
  Grenager, T., Powers, R., Shoham, Y.
  M I T PRESS.2002: 398–403

- **Smoothing Out Focused Demand for Network Resources** *Short version presented at the 2001 ACM Conference on Electronic Commerce (EC'01); also presented at ITCom 2001. Full version to be published in ACM Computer Communications Review*
  Leyton-Brown, K., Porter, R., Venkataraman, S., Prabhakar, B.
  2002

- **Learning the Empirical Hardness of Optimization Problems: the case of combinatorial auctions** *In Constraint Programming.*
  Leyton-Brown, K., Nudelman, E., Shoham, Y., Vetsikas, Y., Bejar, R., Gomes, C.
  2002

- **Polynomial-time reinforcement learning of near-optimal policies** *18th National Conference on Artificial Intelligence/14th Conference on Innovative Applications of Artificial Intelligence*
  Pivazyan, K., Shoham, Y.
  M I T PRESS.2002: 205–210

- **Bidding clubs in first-price auctions** *18th National Conference on Artificial Intelligence/14th Conference on Innovative Applications of Artificial Intelligence*
  Leyton-Brown, K., Shoham, Y., Tennenholtz, M.
  M I T PRESS.2002: 373–378

- **On rational computability and communication complexity** *GAMES AND ECONOMIC BEHAVIOR*
  Shoham, Y., Tennenholtz, M.
  2001; 35 (1-2): 197-211

- **Rational Computation and the Communication Complexity of Auctions** *Games and Economic Behavior*
  Shoham, Y., Tennenholtz, M.
  2001; 35

- **An algorithm for multi-unit combinatorial auctions** *17th National Conference on Artificial Intelligence (AAAI-2000)/12th Conference on Innovative Applications of Artificial Intelligence (IAAI-2000)*
  Leyton-Brown, K., Shoham, Y., Tennenholtz, M.

M I T PRESS.2000: 56–61

- **Bidding Clubs: Institutionalized Collusion in Auctions.**
  Leyton-Brown, K., Tennenholtz, M., Shoham, Y.
  2000

- **Towards a Universal Test Suite for Combinatorial Auctions.**
  Leyton-Brown, K., Pearson, M., Shoham, Y.
  2000

- **Taming the computational complexity of combinatorial auctions: Optimal and approximate approaches** *16th International Joint Conference on Artificial Intelligence (IJCAI 99)*
  Fujishima, Y., Leyton-Brown, K., Shoham, Y.
  MORGAN KAUFMANN PUB INC.1999: 548–553

- **Speeding up ascending-bid auctions** *16th International Joint Conference on Artificial Intelligence (IJCAI 99)*
  Fujishima, Y., McAdams, D., Shoham, Y.
  MORGAN KAUFMANN PUB INC.1999: 554–559

- **Expected utility networks** *15th Conference on Uncertainty in Artificial Intelligence*
  La Mura, P., Shoham, Y.
  MORGAN KAUFMANN PUB INC.1999: 366–373

- **On the knowledge requirements of tasks** *ARTIFICIAL INTELLIGENCE*
  Brafman, R. I., Halpern, J. Y., Shoham, Y.
  1998; 98 (1-2): 317-349

- **Agent Oriented Programming.** *Reading in Agents*
  Shoham, Y.
  edited by Huhns, M., N., Singh, M., P.
  Morgan-Kaufmann.1998

- **Reasoning about Change: Time and Causation from the Standpoint of Artificial Intelligence**
  Shoham, Y.
  MIT Press.1998

- **Conditional, Hierarchical Multi-Agent Preferences.**
  Mura, P., La, Shoham, Y.
  1998

- **From Belief Revision to Belief Fusion.**
  Maynard-Reid II, P., Shoham, Y.
  1998

- **Applications of a logic of knowledge to motion planning under uncertainty** *JOURNAL OF THE ACM*
  Brafman, R. I., Latombe, J. C., Moses, Y., Shoham, Y.
  1997; 44 (5): 633-668

- **On the emergence of social conventions: Modeling, analysis, and simulations** *ARTIFICIAL INTELLIGENCE*
  Shoham, Y., Tennenholtz, M.
  1997; 94 (1-2): 139-166

- **Economic principles of multi-agent systems** *ARTIFICIAL INTELLIGENCE*
  Boutilier, C., Shoham, Y., Wellman, M. P.
  1997; 94 (1-2): 1-6

- **Fab: Content-based, collaborative recommendation** *COMMUNICATIONS OF THE ACM*
  Balabanovic, M., Shoham, Y.
  1997; 40 (3): 66-72

- **A symmetric view of utilities and probabilities** *15th International Joint Conference on Artificial Intelligence*
  Shoham, Y.
  MORGAN KAUFMANN PUB INC.1997: 1324–1329

- **Agent Oriented Programming: a survey.** *Software Agents*
  Shoham, Y.
  edited by Bradshaw, J., M.
  MIT Press.1997

- **Two Senses of Conditional Utility.**
  Shoham, Y.
  1997

- **Qualitative Reasoning about Perception and Belief.**
  Val, A., Del, Shoham, Y., Maynard-Reid II, P.
  1997

- **Conditional utility, utility independence and utility networks** *6th Scandinavian Conference on Artificial Intelligence (SCAI 97)*
  Shoham, Y.
  I O S PRESS.1997: 15–25

- **A dynamic theory of incentives in multi-agent systems (preliminary report)** *15th International Joint Conference on Artificial Intelligence*
  Shoham, Y., Tanaka, K.
  MORGAN KAUFMANN PUB INC.1997: 626–631

- **Information agents: A new challenge for AI** *IEEE EXPERT-INTELLIGENT SYSTEMS & THEIR APPLICATIONS*
  Koller, D., Shoham, Y.
  1996; 11 (3): 8-10

- **Logics of Knowledge and Robot Motion Planning** *Journal of the ACM*
  Brafman, R., Latombe, J, C., Moses, Y., Shoham, Y.
  1996

- **PROVABLY CORRECT THEORIES OF ACTION** *JOURNAL OF THE ASSOCIATION FOR COMPUTING MACHINERY*
  Lin, F. Z., Shoham, Y.
  1995; 42 (2): 293-320

- **ON SOCIAL LAWS FOR ARTIFICIAL AGENT SOCIETIES - OFF-LINE DESIGN** *ARTIFICIAL INTELLIGENCE*
  Shoham, Y., Tennenholtz, M.
  1995; 73 (1-2): 231-252

- **Knowledge considerations in robotics and distribution of robotic tasks** *14th International Joint Conference on Artificial Intelligence (IJCAI-95)*
  Brafman, R. I., Shoham, Y.
  MORGAN KAUFMANN PUB INC.1995: 96–102

- **Nonmonotonic Temporal Reasoning.** *The Handbook of Login in Artificial Intelligence and Logic Programming*
  Sandwall, E., J., Shoham, Y.
  edited by Gabbai, D.
  Elsevier.1995

- **Adaptive Load Balancing: a study of multi-agent learning** *Journal of Artificial Intelligence Research 2*
  Schaerf, A., Shoham, Y., Tennenholtz, M.
  1995: 475-500

- **Artificial Intelligence Techniques in Prolog**
  Shoham, Y.
  Morgan Kaufman Publishers.1994

- **Logics of Mental Attitudes in AI.** *Advances in Knowledge Representation and Reasoning*
  Shoham, Y., Cousins, S., B.

edited by Lakemeyer, G., Mebel, B.

Springer-Verlag.1994

- **Applying Knowledge to Motion Planning Under Uncertainty.**
  Brafman, R., I., Latombe, J, C., Moses, Y., Shoham, Y.
  1994

- **A Unified View of Belief Revision and Update** *Journal of Logic and Computation*
  Val, A., Del, Shoham, Y.
  1994

- **BELIEF AS DEFEASIBLE KNOWLEDGE** *ARTIFICIAL INTELLIGENCE*
  Moses, Y., Shoham, Y.
  1993; 64 (2): 299-321

- **AGENT-ORIENTED PROGRAMMING** *ARTIFICIAL INTELLIGENCE*
  Shoham, Y.
  1993; 60 (1): 51-92

- **TOWARDS KNOWLEDGE-LEVEL ANALYSIS OF MOTION PLANNING** *11th National Conference on Artificial Intelligence (AAAI-93)*
  Brafman, R. I., Latombe, J. C., Shoham, Y.
  M I T PRESS.1993: 670–675

- **Agent Oriented Programming.** *The Encyclopedia of Computer Science and Technology*
  Shoham, Y., Thomas, B.
  edited by Kent, A., Williams, J., G.
  Marcel Dekkar, Inc..1993

- **Agent Oriented Programming** *Journal of Artificial Intelligence*
  Shoham, Y.
  1993; 1 (60): 51-92

- **Deriving Properties of Belief Update from Theories of Action II.**
  Val, A., Del, Shoham, Y.
  1993

- **DERIVING PROPERTIES OF BELIEF UPDATE FROM THEORIES OF ACTION .2.** *13th International Joint Conference on Artificial Intelligence (IJCAI-93)*
  Delval, A., Shoham, Y.
  MORGAN KAUFMANN PUB INC.1993: 732–737

- **REASONING PRECISELY WITH VAGUE CONCEPTS** *11th National Conference on Artificial Intelligence (AAAI-93)*
  Goyal, N., Shoham, Y.
  M I T PRESS.1993: 426–431

- **A LOGIC OF KNOWLEDGE AND JUSTIFIED ASSUMPTIONS** *ARTIFICIAL INTELLIGENCE*
  Lin, F. Z., Shoham, Y.
  1992; 57 (2-3): 271-289

- **EMERGENT CONVENTIONS IN MULTIAGENT SYSTEMS - INITIAL EXPERIMENTAL RESULTS AND OBSERVATIONS (PRELIMINARY-REPORT)** *3rd International Conference on Principles of Knowledge Representation and Reasoning (KR 92)*
  Shoham, Y., Tennenholtz, M.
  MORGAN KAUFMANN PUB INC.1992: 225–231

- **On the Synthesis of Useful Social Laws.**
  Shoham, Y., Tennenholtz, M.
  1992

- **A Mechanism for Reasoning about Time and Belief.**
  Isozaki, H., Shoham, Y.

1992

- **Emergent Conventions in Multi-Agent Systems.**
  Shoham, Y., Tennenholtz, M.
  1992

- **Deriving Properties of Belief Update from Theories of Action.**
  Val, A. D., Shoham, Y.
  1992

- **Agent Oriented Programming: an overview and summary of recent research.**
  Shoham, Y.
  1992

- **Concurrent Actions in the Situation Calculus.**
  Lin, F., Shoham, Y.
  1992

- **On Traffic Laws for Mobile Robots (abstract only)**
  Shoham, Y., Tennenholtz, M.
  1992

- **A PROPOSITIONAL MODAL LOGIC OF TIME INTERVALS** *JOURNAL OF THE ACM*
  Halpern, J. Y., Shoham, Y.
  1991; 38 (4): 935-962

- **PRELIMINARY THOUGHTS ON AN AGENT DESCRIPTION LANGUAGE** *INTERNATIONAL JOURNAL OF INTELLIGENT SYSTEMS*
  Thomas, B., Shoham, Y., Schwartz, A., Kraus, S.
  1991; 6 (5): 497-508

- **NONMONOTONIC REASONING AND CAUSATION - REPLY** *COGNITIVE SCIENCE*
  Shoham, Y.
  1991; 15 (2): 301-303

- **A LOGIC OF RELATIVE DESIRE** *LECTURE NOTES IN ARTIFICIAL INTELLIGENCE*
  Doyle, J., Shoham, Y., Wellman, M. P.
  1991; 542: 16-31

- **Implementing the Intentional Stance.** *Philosophy and Artificial Intelligence*
  Shoham, Y.
  edited by Cummins, R., Pollock, J.
  MIT Press.1991

- **Remarks on Simon's Comments** *Journal of Cognitive Science*
  Shoham, Y.
  1991; 2 (15): 301-303

- **AGENT0: a simple agent language and its interpreter**
  Shoham, Y.
  1991

- **NONMONOTONIC REASONING AND CAUSATION** *COGNITIVE SCIENCE*
  Shoham, Y.
  1990; 14 (2): 213-252

- **EPISTEMIC SEMANTICS FOR FIXED-POINTS NONMONOTONIC LOGICS** *3rd Conference on Theoretical Aspects of Reasoning About Knowledge (TARK 1990)*
  Lin, F. Z., Shoham, Y.
  MORGAN KAUFMANN PUB INC.1990: 111–120

- **On the Complexity of Inheritance Networks and Roles.**
  Hemerely, A., Guerreiro, R., Shoham, Y.
  1990

- **Time for Action.**
  Shoham, Y.
  1989

- **Belief as Defeasible Knowledge.**
  Shoham, Y., Moses, Y.
  1989

- **EFFICIENT REASONING ABOUT RICH TEMPORAL DOMAINS** *JOURNAL OF PHILOSOPHICAL LOGIC*
  Shoham, Y.
  1988; 17 (4): 443-474

- **CHRONOLOGICAL IGNORANCE - EXPERIMENTS IN NONMONOTONIC TEMPORAL REASONING** *ARTIFICIAL INTELLIGENCE*
  Shoham, Y.
  1988; 36 (3): 279-331

- **PROBLEMS IN FORMAL TEMPORAL REASONING** *ARTIFICIAL INTELLIGENCE*
  Shoham, Y., McDermott, D.
  1988; 36 (1): 49-61

- **Problems in Nonmonotonic Temporal Reasoning** *Journal of Artificial Intelligence*
  Shoham, Y., McDermott, D.
  1988; 1 (36): 49-61

- **Temporal Reasoning in AI** *Exploring Artificial Intelligence*
  Shoham, Y., Goyal, N.
  Morgan-Kaufmann.1988: 419–438

- **Temporal Logics in AI** *Journal of Artificial Intelligence*
  Shoham, Y.
  1987; 1 (33): 89-104

- **Chronological Ignorance: time, knowledge, nonmonotonicity, and casual theories.** *Readings in Nonmonotonic Reasoning*
  Shoham, Y.
  edited by Ginsberg, M.
  Morgan-Kaufmann.1987: 396–409

- **Temporal Reasoning.** *The Encyclopedia of Artificial Intelligence*
  Shoham, Y., McDermott, D., V.
  edited by Shapiro, S., C.
  Wiley-Interscience, New York.1987: 967–981

- **Nonmonotonic Logics: meaning and utility.**
  Shoham, Y.
  1987

- **A Semantical Approach to Nonmonotonic Logics.**
  Shoham, Y.
  1987

- **Reified Temporal Logics: semantical and ontological considerations.**
  Shoham, Y.
  1986

- **Chronological Ignorance: time, knowledge, nonmonotonicity and casual theories.**
  Shoham, Y.

1986

- **A Propositional Modal Logic of Time Intervals (short version).**
  Halpern, J., Y., Shoham, Y.
  1986

- **Naive Kinematics: One Aspect of Shape.**
  Shoham, Y.
  1985

- **Ten Requirements from a Theory of Change** *Journal of New Generation Computing 3(4), 467-477, special issue on knowledge representation*
  Shoham, Y.
  1985

- **Reasoning about Causation in Knowledge-Based Systems.**
  Shoham, Y.
  1985

- **Temporal Notation and Causal Terminology.**
  Shoham, Y., Dean, T.
  1985

- **Prolog Predicates as Denoting Directed Relations.**
  Shoham, Y., McDermott, D., V.
  1984

- **FAME: A Prolog Program That Solves Problems in Combinatorics.**
  Shoham, Y.
  1984

- **Knowledge Inversion.**
  Shoham, Y., McDermott, D., V.
  1984