

CURRICULUM VITAE

April 2006

Ehud Kalai, Ph.D.

Home

1110 N. Lake Shore Dr., Apt. 23S
Chicago, IL 60611
Phone: (847) 571-1097
Fax: (312) 482-9772

Office

Department of Managerial Economics and Decision Sciences
Kellogg School of Management
Northwestern University, Evanston, Illinois, 60208
(847) 491-7017; fax (847) 467-3646
e-mail: kalai@kellogg.northwestern.edu

Born, December 7, 1942, Tel Aviv, Israel

Education

Cornell University, Ithaca, New York: Ph.D. in Mathematics (1972); MS in Statistics (1971).
University of California, Berkeley: A.B. in Mathematics (1967).

Permanent Academic Positions

09/75-present Kellogg School of Management, Northwestern University: Visiting Assistant Professor (9/75-9/76), Associate Professor (9/76-9/78), Professor (9/78-9/82), The Charles E. Morrison Professor of Decision Sciences (9/82-9/2001); The James J. O'Connor Distinguished Professor of Decision and Game Sciences (9/2001 - present).
03/90-present Professor of Mathematics (courtesy), Department of Mathematics, CAS, Northwestern University.
10/72-9/75 Assistant Professor, Department of Statistics, Tel Aviv University.

Editorial Positions

Editor and founder, *Games and Economic Behavior*, Academic Press, 1988- .
Member of the Editorial Board of the *International Journal of Game Theory*, Physica Verlag, 1984- .
Member of the Editorial Board of *Mathematical Social Sciences*, North-Holland, 1980-1993.
Associate Editor, *The Journal of Economic Theory*, Academic Press, Inc., 1980-1988.

Other Positions

President of the Game Theory Society, 2003-2006
Co Founder and Executive Vice President of the Game Theory Society, 1998-2003
Director of the Kellogg Center for Strategic Decision-Making, 1995- .
Founding organizer of the Nancy L. Schwartz Memorial Lecture Series, 1981- .
Chairman of the Department of Managerial Economics and Decision Sciences, Kellogg Graduate School of Management, Northwestern University, 1983-1985.
A member of the Board of Directors of *First Savings of America, a Federal Savings and Loan Association*, Orland Park, Illinois, 1986-1989.

Honors, Memberships, Organization, Invited and Keynote Lectures

2005 The First international Workshop on Internet and Network Economics, Hong Kong.

- 2005 Chair of the First GATE Workshop, Northwestern University.
- 2005 The Sixth ACM Conference on Electronic Commerce, Vancouver.
- 2005 Martha and Jonathan Cohen Distinguished Visitor, University of Pennsylvania.
- 2005 *The PIER Lecture*, University of Pennsylvania.
- 2004 The Presidential Address of the Second World Congress of the Game Theory Society Marseilles.
- 2002 The Tenth International Symposium on Dynamic Games and Applications, Saint Petersburg.
- 2002 The First Brazilian Workshop of the Game Theory Society, San Paulo.
- 2001 *The 2001 Pazner Lecture*, Tel Aviv University.
- 2000 *The 2000 Pareto Lecture*, the Association of Southern European Economic Theorists, Lisbon.
- 2000 Distinguished Visitor, The University of California San Diego
- 2000 Program Chair of the First World Congress of the Game Theory Society, Bilbao.
- 1999 The Game Theory Society, Charter Member
- 1998 Chair of the International Workshop on Learning in Game Theory, Stony Brook.
- 1997 The 17th Annual Arne Ryde Symposium, Lund.
- 1996 The Sixth Conference on Theoretical Aspects of Rationality and Knowledge, Renesse, Zeeland.
- 1996 The Seventh Annual ACM-SIAM Symposium on Discrete Algorithms, Atlanta.
- 1996 Sherman Fairchild Distinguished Scholar, California Institute of Technology.
- 1995 The 11th World Congress of the International Economic Association, Tunis.
- 1994 Jacob Marschak Lecture, the University of California, Los Angeles.
- 1995 Chair of the International Conference on Game Theory, Stony Brook.
- 1993 The Alfred Nobel Symposium on Game Theory, Björkborn, Sweden.
- 1992 Joint U.S.-Italy Second Workshop on Knowledge, Belief, and Strategic Interaction, Castiglioncello.
- 1992 Outstanding Professor Award of the Executive Masters Program, Class No. 25.
- 1991 Oskar Morgenstern Research Professor, New York University.
- 1990 The International Conference on Organizations and Games, Marseille-Luminy.
- 1990 The Second International Conference of Economics and Artificial Intelligence, Paris.
- 1989 The Third Symposium on Complexity of Approximately Solved Problems, New York.
- 1988 Elected Fellow of the Econometric Society.
- 1987 The Murphy Lecture on Political Economy, Tulane.
- 1987 Outstanding Professor Award of the Executive Masters Program, Class No. 16.
- 1986 Chairman of the International Workshop on Bounded Rationality, Northwestern.
- 1981 Beta Gamma Sigma
- 1978 Public Choice Society
- 1975 Econometrics Society
- 1971 American Mathematical Society

Grants

- 2006-2009 National Science Foundation Grant No. SES-0527656 in Economics/Computer Science, "DRU Learning and Social Efficiency in Large Games" (with Adam Kalai and Andrew Postlewaite).
- 1999-2002 National Science Foundation Grant No. SES-9904931 in Economics, "Learning and Information in Large Games."

- 1996-1999 National Science Foundation Grant No. SBR-9515421 in Economics, "Learning and Forecasting: Theory and Applications" (with Ehud Lehrer).
- 1993-1996 National Science Foundation Grant No. SBR-9223156 in Economics, "A Subjective Approach to Dynamic Interaction" (with Ehud Lehrer).
- 1991-1993 National Science Foundation Grant No. SES-9022305 in Economics, "Rational Learning in Long Term Interactions" (with Ehud Lehrer).
- 1990-1992 National Science Foundation Grant No. SES-9011790 in Economics, "The Role of Strategic Complexity in Economics."
- 1988-1990 National Science Foundation Grant No. SES-8720342 in Economics, "Strategic Complexity in Extensive Games, "with Dov Samet and William Stanford.
- 1984-1987 National Science Foundation Grant No. SES-8409798 in Economics, "Incentives to Cooperate and Monotonic Solutions to Group Decisions" (with Dov Samet).
- 1982-1984 National Science Foundation Grant No. SES-8208880 in Economics, "Equilibria of Games with Communications Commitments."
- 1981-1982 Kellogg Research Chair in Decision Theory, Northwestern University.
- 1979-1981 National Science Foundation Grant No. SOC-7907542 in Economics, "Alternative Models of Incentives in Economics, "with John Roberts and Mark A. Satterthwaite.
- 1980-1981 IBM Research Chair in Managerial Economics, Department of Managerial Economics and Decision Sciences, Kellogg School, Northwestern University.

Consulting Activities

- McDonalds Corporation Finance Officers, Arlington Heights, 2004, on Behavioral Finance and Decision Making.
- Janssen Pharmaceutica, Boca Raton, 2002, Robust Strategies via Decision and Game Analysis.
- Baxter Healthcare Corporation, Deerfield, Illinois, 2001, Strategic Learning in a Market with New Products.
- Baxter Healthcare Corporation, Deerfield, Illinois, 1999-2000. Strategic Analysis of Competition in China.
- Associated Research, Lake Forest, 1999. Expert Opinion on Proper Assessment of California Taxes.
- Sonnenschein Nath and Rosenthal, Chicago, 1999. Expert opinion in an Alabama Class Action Suit against Allstate.
- CCC information services, Inc., Chicago, Illinois: *Expert opinion on CCC's vehicle valuation system* (1999); *Constructing a Game of Efficient Early Settlements* (1996-7); *The design of National Database and Valuation-Systems for: used automobiles* (1989), *for unsalvageable automobiles* (1990), and *for automobile parts* (1992- 3)
- Phelps Dunbar, L.L/P. Counselors at Law, New Orleans (1998), *Estimating Damages in a Class Action Suit Involving Flammable Chemicals*.
- Kaiser Permanente, Pasadena, California (1995), *Rate Setting in a Competitive Environment*.
- Arthur Anderson & Co., Chicago, Illinois (1990), *Strategic Analysis of Profit Sharing System*.
- First Chicago, The First National Bank of Chicago, Chicago, Illinois (1987), *Mortgage Backed Securities Information Service: Strategic Analysis*.
- Beckman, Kelly and Smith, Attorneys-at-Law, Hammond, Indiana (1985-6): Expert testimony in *Reginald Kinkade Variety Amusement et al. v. Lake County*.
- United States Testing, Wheeling, Illinois (1984): Expert opinion in *Seven-Up v. Cola-Cola*.
- The Steel Tank Institute, Northbrook, Illinois (1982): Actuarial Analysis of *Steel Tank Institute 20-year Warranty of STI-P3*.
- Frieman, Atkins and Colman Law Firm, National Plaza, Chicago, Illinois (1982): Expert testimony in

Taysin Yassin v. The City of Chicago.

Israeli Army, Division of Communications (1974-1975): mathematical and statistical consulting.

Fireman's Fund of America, San Francisco (1967): actuarial trainee.

LIST OF PUBLICATIONS

Journal Publications

- Kalai, E. and M. Smorodinsky, "Other Solutions to Nash's Bargaining Problems," *Econometrica*, 43, No. 3, 1975, 513-518.
- Kalai, E. and M. Smorodinsky, "On a Game-Theoretic Notion of Complexity for Compact Convex Sets," *Proceedings of the American Mathematical Society*, 49, No. 2, 1975, 416-420.
- Kalai, E., "Excess Functions for Cooperative Games Without Sidepayments," *SIAM Journal of Applied Mathematics*, 29, 1975, 60-71.
- Kalai, E., "On Game-Type Subsets," *International Journal of Game Theory*, 4, 1975, 141-150.
- Kalai, E., E. Pazner and D. Schmeidler, "Collective Choice Correspondences as Admissible Outcomes of Social Bargaining Processes," *Econometrica*, 44, 1976, 233-240.
- Kalai, E. and D. Schmeidler, "Aggregation Procedure for Cardinal Preferences: A Formulation and Proof of Samuelson's Impossibility Conjecture," *Econometrica*, 45, 1977, 1431-1437.
- Kalai, E. and D. Schmeidler, "An Admissible Set Occurring in Various Bargaining Situations," *Journal of Economic Theory*, 14, No. 2, 1977, 402-411.
- Kalai, E., "Proportional Solutions to Bargaining Situations: Interpersonal Utility Comparisons," *Econometrica*, 45, No. 7, 1977, 1623-1630.
- Kalai, E., "Non-Symmetric Nash Solutions for Replications of 2-Person Bargaining," *International Journal of Game Theory*, 6, Issue 3, 1977, 129-133.
- Kalai, E. and E. Muller, "Characterization of Domains Admitting Non-Dictatorial Social Welfare Functions and Non-Manipulable Voting Procedures," *Journal of Economic Theory*, 16, No. 2, 1977, 457-467.
- Anbar, D. and E. Kalai, "A One-Shot Bargaining Problem," *International Journal of Game Theory*, 7, Issue 1, 1978, 13-18.
- Kalai, E. and Robert W. Rosenthal, "Arbitration of Two-Party Disputes under Ignorance," *International Journal of Game Theory*, 7, Issue 2, 1978, 65-72.
- Kalai, E., A. Postlewaite and J. Roberts, "Barriers to Trade and Disadvantageous Middlemen: Nonmonotonicity of the Core," *Journal of Economic Theory*, 19, No. 1, 1979, 200-209.
- Kalai, E., A. Postlewaite and J. Roberts, "A Group Incentive Compatible Mechanism Yielding Core Allocations," *Journal of Economic Theory*, 20, No. 1, 1979, 13-22.
- Kalai, E., E. Muller and Mark A. Satterthwaite, "Social Welfare Functions when Preferences are Convex and Continuous: Impossibility Results," *Public Choice*, No. 34, 1979, 87-97.
- Kalai, E. and Z. Ritz, "Characterization of the Private Alternatives Domains Admitting Arrow Social Welfare Functions," *Journal of Economic Theory*, 22, No. 1, 1980, 23-36.
- Kalai, E. and N. Megiddo, "Path Independent Choices," *Econometrica*, 48, No. 3, 1980, 781-784.
- Kalai, E., "Preplay Negotiations and the Prisoners' Dilemma," *Mathematical Social Sciences*, 1, 1981, 375-379.
- Kalai, E. and E. Zemel, "Totally Balanced Games and Games of Flow," *Mathematics of Operations Research*, 7, No. 3, 1982.
- Kalai, E. and E. Zemel, "Generalized Network Problems Yielding Totally Balanced Games," *Operations Research*, 30, No. 4, 1982.
- Kalai, E. and D. Samet, "Persistent Equilibria in Strategic Games," *International Journal of Game Theory*, 13, No. 3, 1984, 129-144.

- Kalai, E. and D. Samet, "Unanimity Games and Pareto Optimality," *International Journal of Game Theory*, 14, Issue 1, 1985, 41-50.
- Kalai, E. and D. Samet, "Monotonic Solutions to General Cooperative Games," *Econometrica*, 53, No. 2, 1985, 307-327.
- Kalai, E. and W. Stanford, "Conjectural Variations Strategies in Accelerated Cournot Games," *International Journal of Industrial Organization*, 3, 1985, 133-152.
- Kalai, E. and W. Stanford, "Finite Rationality and Interpersonal Complexity in Repeated Games," *Econometrica*, 56, No. 2, 1988, 387-410.
- Kalai, E., "Strategic Behavior and Competition: An overview," *Journal of Economic Theory*, 39, No. 1, 1986, 1-13.
- Kalai, E. and D. Samet, "On Weighted Shapley Values," *Int. J. of Game Theory*, 16, 1987, 205-222.
- Kalai, E., D. Samet and W. Stanford, "A Note on Reactive Equilibria in the Discounted Prisoners' Dilemma," *International Journal of Game Theory*, Issue 3, 1988, 177-186.
- Kalai, E., "Games and Economic Behavior," Editorial, *Games and Economic Behavior*, Vol. 1, Issue 1, 1989, 1-5.
- Gilboa, I., E. Kalai and E. Zemel, "On the Order of Eliminating Dominated Strategies," *Operations Research Letters*, 9, 1990, 85-89.
- Fershtman, C., K. Judd and E. Kalai, "Observable Contracts: Strategic Delegation and Cooperation," *International Economic Review*, 32 (3), 1991, 551-559.
- Kalai, E. and A. Neme, "The Strength of a Little Perfection," *International Journal of Game Theory*, 20 (4), 1992, 335-355.
- Kalai, E., M. I. Kamien and M. Rubinovitch, "Optimal Service Speeds in a Competitive Environment," *Management Science*, 38, No. 8, 1992, 1154-1163.
- Fershtman, C. and E. Kalai, "Complexity Considerations in Market Behavior," *The RAND Journal of Economics*, 24, No. 2, 1993, 224-235.
- Baron, D. and E. Kalai, "The Simplest Equilibrium of a Majority-Rule Division Game," *Journal of Economic Theory*, 61, No. 2, 1993, 290-301.
- Gilboa, I., E. Kalai and E. Zemel, "The Complexity of Eliminating Dominated Strategies," *Mathematics of Operations Research*, 18, No. 3, 1993, 553-565.
- Kalai, E. and E. Lehrer, "Rational Learning Leads to Nash Equilibrium," *Econometrica*, 61, No. 5, 1993, 1019-1045.
- Kalai, E. and E. Lehrer, "Subjective Equilibrium in Repeated Games," *Econometrica*, 61, No. 5, 1993, 1231-1240.
- Kalai, E. and E. Lehrer, "Weak and Strong Merging of Opinions," *Journal of Mathematical Economics*, 23, 1994, 73-86.
- Kalai, E. and E. Lehrer, "Subjective Games and Equilibria," *Games and Economic Behavior*, 8, No. 1, 1995, 123-163.
- Kalai, E., "Games, Computers, and O.R.," *Proceedings of the Seventh Annual ACM-SIAM Symposium on Discrete Algorithms*, 1996, 468-473.
- Jackson, M. and E. Kalai, "Social Learning in Recurring Games," *Games and Economic Behavior*, 21, No. 1/2, 1997, 102-134.
- Fershtman, C. and E. Kalai, "Unobserved Delegation," *International Economic Review*, 38, No. 4, 1997, 763-774.
- Kalai, E., E. Lehrer and R. Smorodinsky, "Calibrated Forecasting and Merging," *Games and Economic Behavior*, 29, No. 1/2, 1999, 151-159.
- Jackson, M., E. Kalai and R. Smorodinsky, "Bayesian Representations of Stochastic Processes Under Learning: deFinetti Revisited," *Econometrica*, 67, No. 4, 1999, 875-894.
- Kalai, E. and J. O. Ledyard, "Repeated Implementation," *Journal of Economic Theory*, 83, No. 2, 1998, 308-317.

- Jackson, M. O. and E. Kalai, "Reputation versus Social Learning," *Journal of Economic Theory*, 88, No. 1, 1999, 40-59.
- Kalai, A. and E. Kalai, "Strategic Polarization," *Journal of Mathematical Psychology*, 45, No. 4, August 2001, 656-663.
- Kalai, E. and E. Solan, "Randomization and Simplification," *Journal of Economic Theory*, 111, No. 2, August 2003, pp 251-264.
- Kalai, E., "Large Robust Games," *Econometrica*, 72, No. 6, November 2004, pp 1631-1666.
- Kalai, E., "Partially-Specified Large Games," *Lecture Notes in Computer Science*, Vol. 3828, 2005, 3 – 13

Book Contributions

- Kalai, E., A. Postlewaite and J. Roberts, "Arbitration of Exchange Situations with Public Goods," in *Applied Game Theory*, Brams, Schotter and Schwodiauer (eds.), Physica Verlag, 1979.
- Kalai, E., "Solutions to the Bargaining Problem," in *Social Goals and Social Organization, Essays in Memory of Elisha A. Pazner*, Hurwicz, Schmeidler and Sonnenschein (eds.), Cambridge University Press, 1985, 77-105.
- Kalai, E. and D. Samet, "Weighted Shapley Values," in *The Shapley Value, Essays in Honor of Lloyd S. Shapley*, A. Roth (ed.), Cambridge University Press, 1988, 83-100.
- Kalai, E., "Bounded Rationality and Strategic Complexity in Repeated Games," in *Game Theory and Applications*, Ichiishi, Neyman and Tauman (eds.), Academic Press, 1990, 131-157.
- Kalai, E. and D. Samet, "Types Decomposition and Perfect Implementations," in *Rational Interaction, Essays in Honor of John C. Harsanyi*, Reinhard Selten (ed.), Springer-Verlag, 1992, 97-119.
- Kalai, E., "A Rational Game Theory Framework for the Analysis of Legal and Criminal Decision Making," in *Inside the Juror: The Psychology of Juror Decision Making*, R. Hastie (ed.), Cambridge University Press, 1993, 235-241.
- Kalai, E. and Mark A. Satterthwaite, "The Kinked Demand Curve, Facilitating Practices, and Oligopolistic Coordination," in *Imperfection and Behavior in Economic Organizations*, R. P. Gilles and P. H. M. Ruys (eds.), Kluwer Academic Publishers, 1994, pp. 15-38.
- Jackson, M. and E. Kalai, "Recurring Bullies, Trembling and Learning," in *Understanding Strategic Interaction: Essays in Honor of Reinhard Selten*, W. Albers, W. Guth, P. Hammerstein, B. Moldovanu, and E. Van Damme (eds), Springer, 1997, pp 171-184.
- Jacobs, D.P., E. Kalai and M. I. Kamien(eds), *Frontiers of Research in Economic Theory: The Nancy L. Schwartz Memorial Lectures, 1983-1997*, Cambridge Univ. Press 1998.
- Jackson, M. and E. Kalai, "Social Learning in Recurring Games," Chapter 6 in *Social Organization and Mechanism Design*, Claude d'Aspremont (ed), De Boeck & Larcier s.a., 1999, pp 107-136.
- Kalai, E. and E. Lehrer, "Rational Learning in Repeated Games" in *Recent Development in Game Theory*, E. Maskin (ed), 1999, Edward Elgar Publishing.

Recent Participation in Scientific Meetings and Invited Lectures

- | | |
|-------|--|
| 04/06 | A Symposium honoring Nobel Laureate Robert Aumann, Stony Brook, presented "A Large Market Game." |
| 04/06 | Cornell University, presented "Good and Bad News about Nash Equilibria with Many Participants." |
| 04/06 | University of Chicago, presented "Good and Bad News about Nash Equilibria with Many Participants." |
| 03/06 | Vanderbilt University, presented "Embedding a Game in a Bigger World." |

- 03/06 Texas A&M University, presented "Embedding a Game in a Bigger World."
- 03/06 Rice University, presented "Embedding a Game in a Bigger World."
- 03/06 University of Texas at Austin, presented "Embedding a Game in a Bigger World."
- 12/05 Tel Aviv University, presented "Partially Specified Games."
- 12/05 A Key Note Address to The international Workshop on Network and Internet Economics, Hong Kong, "Partially Specified Large Games."
- 12/05 Invited participant in the Nobel Prize in Economics Ceremony, Stockholm.
- 10/05 University of Pittsburgh, presented "Structurally-Robust Large Games."
- 06/05 European Summer School on Game Theory, Lisbon, Lectures on strategic learning and on large games.
- 06/05 The Technion, Haifa, presented "Structural Robustness in Large Games."
- 06/05 The Sixth ACM Conference on Electronic Commerce, Vancouver, invited lecture, "Structural Robustness in Large Games."
- 04/05 Barcelona JOCS Seminar, "Structural Robustness in Large Games."
- 04/05 Santiago de Compostela University, presented "Structural Robustness in Large Games."
- 03/05 The PIER Lecture at the University of Pennsylvania, presented "The Good and Bad News about Large Equilibria."
- 12/04 The Institute for Advanced Studies, The Hebrew University in Jerusalem, presented "Program Equilibria and Metagames."
- 12/04 The Hebrew University in Jerusalem, Dept of Econ., presented "Extensive Robustness Revisited."
- 10/04 Yale University, Cowles Uncertainty Workshop in Honor of David Schmeidler, presented "Extensive Robustness Revisited."
- 07/04 The International Workshop on Game Theory, Stony Brook, presented "Extensive Robustness Revisited."
- 07/04 The Presidential Address of the Second World Congress of the Game Theory Society, Marseilles, "What would von Neumann and Morgenstern Say?"
- 03/04 University of Carlos III Madrid, Department of Economics, presented "Extensive Robustness in Large Games."
- 03/04 University of Seville, Department of Economics, presented "Extensive Robustness in Large Games."
- 03/04 University of Alicante, Department of Economics, presented "Extensive Robustness in Large Games."
- 03/04 University of the Basque Country, Department of Economics, presented "Extensive Robustness in Large Games."
- 12/03 Tel-Aviv University, School of Mathematics, presented "Large Robust Games."
- 07/03 The International Conference of Game Theory, Stony Brook, presented "Large Robust Games."
- 06/03 University of Haifa, Department of Economics, presented "Large Robust Games."
- 05/03 University of Tilburgh, Department of Economics, presented "Large Robust Games."
- 05/03 London School of Economics, Department of Economics, presented "Large Robust Games."
- 05/03 University of Essex, Department of Economics, presented "Large Robust Games."
- 05/03 University of Warwick, Department of Economics, presented "Large Robust Games."
- 05/03 University of Bonn, Department of Economics, presented "Large Robust Games."
- 04/03 MIT Computer Science, presented "Robust Equilibria in Games with Many Agents."
- 04/03 Harvard / MIT Economic Theory Workshop, presented "Extensively Robust Equilibria in Large Games."
- 04/03 New York University, presented "Extensively Robust Equilibria in Large Games."
- 03/03 Yale University, presented "Extensively Robust Equilibria in Large Games."

- 02/03 Conference on Game Theory Laguna Beach, present "Large Robust Games."
12/02 Tel Aviv University, presented "Large Robust Games."
12/02 Technion, Israel Institute of Technology, presented "Large Robust Games."
07/02 IMPA conference on Mathematical Economics, Rio de Janeiro, presented "Large Robust Games."
07/02 Latin American Meeting of the Econometric Society, San Paulo, presented "Large Robust Games."
07/02 The First Brazilian Workshop of the Game Theory Society, San Paulo, presented "Large Robust Games."
07/02 The Tenth International Symposium on Dynamic Games and Applications, Saint Petersburg, presented "Private Information in Large Games."
07/02 Hebrew University, Jerusalem, presented "Private Information in Large Games."
05/02 The University of Pennsylvania, presented "Private Information in Large Games."
05/02 Princeton University, presented "Private Information in Large Games."
05/02 The Midwestern Meeting on Mathematical Economics, Evanston, presented "Private Information in Large Games."