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Experience

- (1999 to date) **John L. and Helen Kellogg** Professor of Managerial Economics and Decision Sciences, **Kellogg School of Management, Northwestern University**.
- (2010 to date) Professor (Courtesy), Department of Economics, **Weinberg College of Arts and Sciences, Northwestern University**.
- (2006 to date) Professor (Courtesy), Electrical Engineering and Computer Science, **McCormick School, Northwestern University**.
- (1998 to 1999) Professor of Managerial Economics and Decision Sciences, **Kellogg School of Management, Northwestern University**.
- (1991 to 1998) Associate Professor of Management Science and Industrial Engineering, **Fisher College of Business, The Ohio State University**.
- (1985 to 1991) Assistant Professor of Management Science, **Fisher College of Business, The Ohio State University**.
- (Summer 2011) Visiting Researcher, **Microsoft Research, New England**.
- (Summer 2006) Visiting Researcher, **Microsoft Research, Redmond**.
- (Winter 2005) Visiting Scholar, **California Institute of Technology**.
- (Spring 2004, 2006, 2011) Visiting Professor, **Indian School of Business**.
- (Summer 2003) *METEOR* Fellow, Department of Quantitative Economics, **University of Maastricht**.
- (September 2000) Cycle and Carriage Visiting Professor, Department of Decision Sciences, **College of Business, National University of Singapore**.

- (1997-1998) Visiting Associate Professor, **The Kellogg School of Management, Northwestern University**.
- (1992 -1993, Summer '96) Visiting Associate Professor, **The Sloan School, MIT**.
- (Spring '91) Visiting Assistant Professor, **The Graduate School of Business, University of Chicago**.
- (Feb. 1989) Visiting Scholar, Department of Computer Science, **Southern Methodist University**.
- (Fall '88 and '89) Visiting Assistant Professor, **The Wharton School, University of Pennsylvania**.
- (Dec. '87 to Jan. '88) Visiting Member, **Institute for Mathematics and its Applications, University of Minnesota**.

Education

- Ph. D., Mathematics, **University of Maryland**, 1985
- M.Sc., Operational Research,**London School of Economics**, 1981
- B.Sc. (Hon.), Mathematics, **University College London**, 1980

Publications

1. The Tempered Aspirations Solution for Bargaining Problems with a Reference Point, **Mathematical Social Sciences**, 62(3): 144-150, 2011 (with J. C. Gomez and S. Balakrishnan).
2. An Ascending Vickrey Auction for Selling Bases of a Matroid, **Operations Research**, vol. 59, 400-413, 2011 (with S. Bikhchandani, S. de Vries and J. Schummer).
3. Spectrum Markets: Motivation, Challenges, and Implications, **IEEE Communications Magazine**, 48(11), 146-155, 2010 (with R. Berry and M. L. Honig).
4. Characterization of Revenue Equivalence, **Econometrica**, vol. 77, 307-316, 2009 (with Birgit Heydenreich, Rudolf Muller and Marc Uetz).
5. The Complexity of Testing Forecasts, **Econometrica**, vol. 77, 93-105, 2009 (with Lance Fortnow).
6. Optimal Auctions for Asymmetrically Liquidity Constrained Bidders, **Review of Economic Design**, vol. 12, 245-258, 2008 (with Alexey Malakhov).
7. An Optimal Auction for Capacity Constrained Bidders- A Network Perspective, **Economic Theory**, 39, 113-128, 2009. (with Alexey Malakhov).
8. Extendability and von-Neuman-Morgenstern Stability of the Core, **International Journal of Game Theory**, forthcoming (with Kamal Jain).

9. Bounds on the Inefficiency of Sequential Auctions, **IEEE Journal on Selected Areas in Communications**, vol. 26, 1193-1203, 2008 (with Junjik Bae, Eyal Beigman, Randall Berry and Michael Honig).

10. Polyhedral Properties of the K-median Problem on a Tree, **Mathematical Programming**, vol. 110, 261-285, 2007 (with S. de Vries and Marc Posner).

11. On Ascending Vickrey Auctions, **Journal of Economic Theory**, vol. 132, 95-118, 2006 (with S. de Vries and J. Schummer).

12. Anonymous Monotonic Social Welfare Functions, **Journal of Economic Theory**, vol. 128, 232-254, 2006 (with Jay Sethuraman and Teo Chung Piaw).

13. Market Research and Market Design, **BE Journals in Theoretical Economics**, vol. 3, issue 1, 2003 (with S. Baliga).

14. A Characterization of Additive Cost Sharing Methods, **Economic Letters**, 80, 399-407, 2003 (with H. Moulin).

15. Integer Programming and Arrovian Social Welfare Functions, **Mathematics of Operations Research**, vol. 28, No. 2, 309-326, 2003. (with J. Sethuraman and C. P. Teo).[1].

16. Calibration with Many Checking Rules, **Mathematics of Operations Research**, vol. 28, 1, 141-153, 2003 (with A. Sandroni and R. Smorodinsky).

17. Correlated Equilibrium, Public Signalling and Absorbing Games, **International J. Game Theory**, vol. 31, 91-122, 2002 (with E. Solan).

18. Auctions for Procuring Options, **Operations Research**, vol. 51, 1, 41-51, 2003 (with J. Schummer).

19. Combinatorial Auctions: A Survey, **INFORMS J. of Computing**, vol. 15, #3, 284-309, 2003 (with Sven de Vries).

20. Correlated Equilibrium and Quitting Games, **Mathematics of Operations Research**, vol. 26, 3, 601-610, 2001 (with Eilon Solan).

21. Strategy-Proof Location on a Network, **Journal of Economic Theory**, 104, 405-428, 2002 (with James Schummer).

22. The Replacement Principle and Tree Structured Preferences, **Economic Letters**, vol. 63, 2, 175-180, 1999.

23. Regret in the On-line Decision Problem, **Games and Economic Behavior**, 29, 7-35, 1999 (with D. Foster).

[1] An earlier version appeared in the **Proceedings of the 9th (IPCO) Conference on Integer Programming and Combinatorial Optimization**, 2002

24. Rounding Algorithms for Covering Problems, **Mathematical Programming**, vol. 80, 1, 63-90, 1998 (with D. Bertsimas).

25. Asymptotic Calibration, **Biometrika**, vol. 85, 2, 379-390, 1998. (with D. Foster).

26. Calibrated Learning and Correlated Equilibrium, **Games and Economic Behavior**, 21, 40-55, 1997 (with D. Foster).

27. An Axiomatic Characterization of a Class of Locations in Trees, **Operations Research**, vol. 46, 3, 347-354, 1998 (with D. Foster).

28. A Parametric Worst Case Analysis for a Machine Scheduling Problem, **Operations Research**, 45, #1, 116-125, 1996, (with P. Mireault and J. Orlin).

29. New Randomized Rounding Algorithms, **Operations Research Letters**, vol. 24, 3, 105-114, 1999[2], (with C. Teo and D. Bertsimas).

30. An Axiomatic Characterization of Some Locations in Trees, **European Journal of Operational Research**, 90, 78-84, 1996.

31. Analysis of LP relaxations for multiway and multicut problems, **Networks**, vol.34, 102-114, 1999 [3], (with C. Teo and D. Bertsimas).

32. New Algorithms for an Ancient Scheduling Problem, **Journal of Computer and System Science**[4], vol. 51, #3, 359-366, 1995. (with Y. Bartal, A. Fiat and H. Karloff).

33. Average Case Analysis of a Heuristic for the Assignment Problem, **Mathematics of Operations Research**, vol. 19, #3, 513-522, 1994 (with R. Karp and A. Rinnooy-Kan).

34. A Probabilistic Analysis of the Maximal Covering Location Problem, **Discrete Applied Mathematics**, 43, 175-183, 1993 (with N. Hall),

35. Pareto Optimality and a Class of Set Covering Heuristics, **Annals of Operations Research**, vol.43, 1993 (with N. Hall).

36. Towards Equitable Distribution via Proportional Equity Constraints, **Mathematical Programming**, vol. 58, #2, 287-294, 1993 (with N. Hall).

37. A Randomized Rule for Selecting Forecasts, **Operations Research**, vol. 41, #4, 704-709, 1993 (with D. Foster).

38. An Economic Argument for Affirmative Action, **Rationality and Society**, vol. 4, #2, 176-188, 1992 (with D. Foster).

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[2] An earlier version appeared in **Proceedings of the 5th (IPCO) Conference on Integer Programming and Combinatorial Optimization**, June 1996.

[3] An earlier version appeared in **Proceedings of the 4th (IPCO) Conference on Integer Programming and Combinatorial Optimization**, May 1995.

[4] An earlier version appeared in the **STOC Procedings**, 1992.

39. A Probabilistic Analysis of the K-Location Problem, **American Journal of Mathematical and Management Sciences**, vol. 12, #1, 75-87, 1992 (with D. Foster).

40. Computing the Bandwidth of Interval Graphs, **SIAM J. on Discrete Mathematics**, vol. 3, #3, 373-375, 1990 (with D. Kleitman).

41. Finding the Most Vital Arcs in a Network, **Operations Research Letters**, vol. 8, #2, 1989 (with M. Ball and B. Golden).

42. Absolute Bounds on Optimal Cost for a Class of Set Covering Problems, **Zeitschrift fur O. R.**, series A, 33, 181-192, 1989 (with N. Hall).

43. Distance Weighted Voting and a Single Facility Location Problem, **European Journal of Operational Research**, vol. 41, #3, 314-320, 1989.

44. Probabilistic Analysis of a Heuristic for the Dual Bin Packing Problem, **Information Processing Letters**, vol. 31, 287-290, 1989 (with D. Foster).

45. A Simple Trade-Off Model for Maximal and Multiple Coverage, **Geographical Analysis**, vol. 20, #3, 220-230, 1988 (with J. Storbeck).

46. A Quick Heuristic for some Cyclic Staffing Problems with Breaks, **Journal of The Operational Research Society**, vol. 39, #11, 1057-1061, 1988.

47. Probabilistic Analysis of the Longest Hamiltonian Tour Problem, **Networks**, vol. 18, 13-18, 1988.

48. The Orienteering Problem, **Naval Research Logistics**, vol. 34, 307-318, 1987 (with B. Golden and L. Levy).

49. The Cost of Consecutivity in the (5,7) Cyclic Staffing Problem, **IIE Transactions**, vol. 19, #3, 13-18, 1987.

50. The On-Line Assignment Problem with Random Effectiveness and Costly Information, **O.R. Letters**, vol. 6, #4, 163-168, 1987 (with N. Hall).

51. Counting Spanning Trees in a Graph of Kleitman and Golden and its Generalization, **Journal of the Franklin Institute**, vol. 318, #5, 349-355, 1984 (with L. Washington).

Articles, Working Papers

1. Determining Strong Edge Connectivity in $O(\lambda n^2)$ (with D. Matula).

2. Approximate DP and Facility Location (with C.P. Teo and D. Bertsimas).

3. Calibration, Expected Utility and Local Optimality (with D. Foster).

4. Linear Programming and Vickrey Auctions (with S. Bikhchandani, S. de Vries and J. Schummer).

5. Auctions and the German UMTS auction (with S. de Vries).[5]
6. Negative Cycles and Afriat's Theorem, 2003 (with Teo Chung Piaw.)
7. Characterizing Dominant Strategy Mechanisms with Multidimensional Types, 2004 (with HongWei Gui, Rudolf Muller).
8. Single and Multi-Dimensional Optimal Auctions - A Network Approach, 2004 (with Alexey Malakhov).
9. Learning from Revealed Preference, 2006 (with Eyal Beigmann).[6]
10. Axiomatic Characterization of the Absolute Median on Cube-free median graphs, 2006 (with Henry Mulder).
11. Paths, Cycle and Mechanism Design, 2007 (this developed into the Mechanism Design book below).
12. Kelly-Type Mechanisms for Polymatroids, 2007 (with Randall Berry).
13. Optimal Dynamic Auctions, 2008 (with Mallesh Pai).
14. Optimal Auctions with Financially Constrained Bidders, 2008 (with Mallesh Pai).
15. Incentives and Resource Sharing in Spectrum Commons, *Proceedings of the 2008 IEEE Symposium on New Frontiers in Dynamic Spectrum Access Networks (DySPAN 2008)*, Chicago, IL, Oct. 14-17, 2008 (with J. Bae, E. Beigman, R. Berry and M. Honig).
16. Complementarities in Spectrum Markets, *Allerton Conference on Communication, Control, and Computing*, Monticello, IL, Sep. 2009 (with H. Zhou, R. Berry and M. Honig).
17. The Impact of Additional Unlicensed Spectrum on Wireless Services Competition, *Proceedings of the IEEE DySPAN 2011 conference*, (with T. Ngyuen, H. Zhou, R. Berry and M. Honig).
18. Spectrum markets with interference complementarities, *WiOpt 2011*, 241-248, 2011 (with Hang Zhou, Randall A. Berry, Michael L. Honig)
19. Dynamic Cost-Per-Acquisition Keyword Auction, forthcoming (with H. Nazerzadeh and A. Saberi).
20. The Price of Free Spectrum to Heterogeneous Users, *NetEcon 2011*, (with Thnh Nguyen, Hang Zhou, Randall Berry, Michael Honig).

Books and Book Chapters

1. **Mechanism Design: A Linear Programming Approach**, Econometric Society Monograph, Cambridge University Press, April 2011.
2. **Principles of Pricing** (with Lakshman Krishnamurthy), Cambridge University Press, March 2012.

[5] Appeared in the January 2001 issue of the quarterly newsletter of the German Mathematical Society (DMV-MItteilungen).

[6] This paper appeared in the 2006 Proceedings of the ACM conference on Electronic Commerce.

3. Axiomatic Characterization of Location Functions (with F. R. McMorris and Martyn Mulder) in **Advances in Interdisciplinary Applied Discrete Mathematics. Interconnections between Consensus and Voting Theory, Clustering, Location Theory, Mathematical Biology, and Optimization**, edited by H. Kaul and H. M. Mulder, World Scientific Press, 2011.
4. Mechanism Design without Money (with James Schummer) in **Algorithmic Game Theory**, edited by N. Nisan, T. Roughgarden, E. Tardos and V. Vazirani, Cambridge University Press, 2008.
5. Sponsored Search Auctions (with S. Lahaie, D. Pennock and A. Saberi) in **Algorithmic Game Theory**, edited by N. Nisan, T. Roughgarden, E. Tardos and V. Vazirani, Cambridge University Press, 2008.
6. The Ubiquitous Farkas Lemma in **Perspectives in Operations Research**, edited by F. Alt, M. Fu and B. Golden, published by Springer, 2006.
7. **Advanced Mathematical Economics**, Routledge, London, 2004.
8. **Mathematics of the Internet**, edited volume of papers from an IMA topics workshop on Auctions and Markets. Co-edited with Brenda Dietrich, published by Springer-Verlag, 2002.
9. Design of Combinatorial Auctions (with Sven de Vries) in **Handbook of Quantitative Supply Chain Analysis**, edited by D. Simchi-Levi, S, David Wu and Zuo-Jun Shen, published by Kluwer, 2004.

Grants and Awards

- Economic Theory Fellow, Society for the Advancement of Economic Theory, 2011.
- NSF (NeTS: Medium) Design of Dynamic Spectrum Markets for Wireless Networks joint with R. Berry and M. Honig (2008-2012).
- Sidney Levy teaching award, 2008, Kellogg School of Business.
- Professor of the Year, Class of 2007, Indian School of Business.
- NSF (NeTS) grant: "Smart markets for Smart Radios", joint with R. Berry and M. Honig (2005-2008).
- NSF (ITR/PE+SY) grant: "Foundations of Electronic Marketplaces: Game Theory, Algorithms and Systems", joint with T. Sandholm, M. Satterthwaite, S. Suri, (2001-2006).
- Kellogg School of Management Chair's Core teaching Award, 1999.
- Fisher College of Business Pace Setter (graduate) Teaching Award, 1997
- Outstanding Fisher College MBA Core Instructor, 1996, 1997, 1998.
- Fisher College Dean's Summer Fellowship, 1992, 1995, 1997.
- Jacob Wolfowitz Prize, 1993.

- Fisher College Dean's Research Professorship 1988.
- Ohio State University Interdisciplinary Research Grant to investigate the causes of wrongful conviction (joint with R. Huff, K. Schwirrian and A. Desai) 1989, 1990.
- AT & T Manufacturing Systems (Ohio) grant to investigate the allocation of inventory in their cellular manufacturing division (1989-1990, joint with Marc Posner).
- AT & T Manufacturing Systems (Ohio) grant to investigate assembly line balancing in their circuit board manufacturing division (1992).

Editorial Positions

- Co-editor, **International Journal of Game Theory**, August 2008 to August 2011.
- Associate Editor, **Games and Economic Behavior**, 2005 to date.
- Associate Editor, **Mathematics of Operations Research**, 2005 to 2009.
- Associate Editor, **Operations Research**, 2003 to 2005.
- Associate Editor **International Journal of Game Theory**, 2001 to 2008.
- Associate Editor, **Networks**, 1999 to 2002.
- Guest Editor (with D. Foster and D. Levine) of a special issue of **Games and Economic Behavior**, 1996.
- Associate Editor, **Management Science**, 1995 to 2004.
- Reviewer for Zentralblatt fur Mathematik/Mathematical Abstracts, 1994 to 1997.
- Referee for Operations Research, Management Science, Mathematics of Operations Research, Mathematical Programming, SIAM J. Computing, SIAM J. Discrete Mathematics, Networks, Operations Research Letters, Random Structures and Algorithms, Transportation Science, ORSA J. Computing, Decision Sciences, Applied Mathematics Letters, Naval Research Logistics, American J. Mathematical and Management Sciences, Computers and Operations Research, European J. Operational Research, IEE Transactions on Systems and Cybernetics, Telecommunications Systems, Location Science , Journal of Economic Theory, Information Processing Letters, Journal of Combinatorial Optimization, Games and Economic Behavior, International J. of Game Theory, Econometrica, Review of Economic Studies, American Economic Review, Marketing Science Guggenheim Foundation and the NSF.

Administrative Appointments

- Director, Center for Mathematical Studies in Economics and Management Science, Kellogg School (2007- to date).

- Chair, MEDS department, Kellogg School of Management, Northwestern University, September 2002 to 2004.

Other Professional Service

- Member, program committee, North American Winter Meeting of the Econometric Society, 2010.
- Member, program committee, Fourth Sponsored Search Workshop, 2008.
- Member, program committee, 2008 Electronic Commerce conference.
- Member, faculty search committee of the EECS department, 2006-2007.
- Member, organizing committee of the Third World Congress of the Game Theory Society, 2008.
- Member, Visiting Committee to review the Decision Sciences department of the National University of Singapore, 2007.
- Member, Northwestern University's search committee for the Assistant VP of Human Resources, 2007.
- Member, program committee, Third Sponsored Search Workshop, 2007.
- Chair of the 2006 Nicholson Prize Committee.
- Member, program committee, 2006 Electronic Commerce conference.
- Member of 2005 Nicholson Prize Committee.
- Co-organizer (with Jeff Ely) of the 2005 Nemmer's prize symposium.
- Co-organizer (with Lance Fortnow) of DIMACS workshop on Large Scale Games, 2005.
- Member, Programme Commitee, 2nd Workshop on the Economcis of Peer-to-Peer Systems, 2004.
- Co-chair (with Fred Roberts and Lance Fortnow) of DIMACS special focus on Computation and the Socio-economic Sciences (2004-2006).
- Co-organizer (with David Austen-Smith and Tim Feddersen) of a workshop on Game Theory and Ethics, 2003.
- Chair, Lanchester prize Committee, 2003.
- Chair, Program Committee, 2003 North American Summer Meeting of the Econometric Society.
- Member, 2003 Walras-Bowley Lecturer selection committee.
- Co-organizer (with Daniel Lehmann and Rudolf Muller) of a 'Dagsthul' workshop on Electronic Design held in 2002.
- Co-organizer (with Brenda Dietrich, John Birge, Fadil Santosa) of a workshop on E-acutions and Markets at the Institute of Mathematics and its Applications, December 2000.

- Co-organizer of a DRRC (Dispute Resolution Research Center) workshop on electronic auctions, markets and negotiation, September 2000.
- Co-organizer (with Yoav Freund) of a Symposium entitled 'Predicting More Assuming Less' at the Febraury 2000 AAAS Meeting.
- Co-organizer (with Yoav Freund) of DIMACS workshop on On-Line Decision Making, June 1999.
- Co-organizer (with D. Foster and M. Warmuth) of Prediction Workshop at Santa Cruz, 1996.
- Co-organizer (with D. Foster) of the first IIASA Tournament on Learning in Games.
- Member of the '93-'94 Lanchester Prize Committee of ORSA.
- Cluster Chair, Integer Programming, '94 Boston TIMS/ORSA meeting .
- Lecturer, SIAM Visiting Lecturer Program, 1992 to 2001.
  Presentations at Departments of Mathematics at, **Wright State University**, **Glenville State College**, **University of Akron**, **Wheeling College**; **Judson College**, **Clarion University**, **Northern Michigan University**, **Northern Illinois University**.

Presentations

Plenary and Tutorials:

- Plenary Speaker, 2011, Stony Brook Game Theory Festival.
- Plenary Speaker, 2010 Workshop on Internet and Network Economics
- Plenary speaker, 2010 World Congress of the Econometric Society.
- Plenary speaker, 2006 SODA conference.
- Plenary speaker, 2005 Spanish, Italian and Netherlands Game Theory Conference.
- Plenary speaker, 2005 Lunteren conference of the Dutch OR society.
- Lecturer, IPCO 2004 summer school.
- Tutorial (on Non-Bayesian Models of Learning in Games) at 8th ISDG meeting, 1998.
- Tutorial (on Game Theory) presenter (with D. Foster) at Joint ICML/COLT meeting, 1997

Conferences: ORSA/TIMS (various), International Mathematical Programming Symposium (various), SIAM Conference on Discrete Mathematics (various), SIAM conference on Applied Probability (various), Smart Symposium on Game Theory (various), Symposium on Theory of Computing, Institute of Mathematical Statistics Meeting, NBER Conference on General Equlibrium, Integer Programming and Combinatorial

Optimization Conference (various), Economic Theory Conference, AAAI Fall Symposium, Montreal Optimization Days, DIMACS workshops (various), International Society of Dynamic Games, Canadian Economic Theory Workshop, Stony Brook Game Theory Conference (various), BRICS workshop on Probability and Optimization, First World Congress on Game Theory, INFONOMICS workshop, SITE 2002, Dagsthul, NIPS 2002, FCC-Wye River Workshop, FAA-Wye River Workshop, Cowles Foundation Workshop (various), Aladdin Workshop, AGATE 2004, 2006, Rothkopf Memorial conference, 2009, Third Annual CAPCP Conference at Penn State 2010, CEPR European Summer Symposium in Economic Theory in Gerzensee, 2010, McKenzie Memorial Conference, 2011.

Invited Seminars: Mathematics Department, **University of Minnesotta**; Mathematics Department, **Ohio State University**; Industrial Engineering Department, **Ohio State University**; Computer Science Department, **Texas A & M University**; Computer Science Department, **Southern Methodist University**; Decision Sciences Department, **University of Pennsylvannia**; Operations Research Center, **MIT**; Computer Science Department, **Purdue University**; Economics Department, **Ohio State University**; Economics Department, **Temple University**; Management Science Department, **University of Chicago**; Department of Mathematical Sciences, **Johns Hopkins University**; Department of Management Science and Information Systems, **University of Texas at Austin**; Department of Industrial and Operations Engineering, **University of Michigan**, Department of Mathematics, **University of Southampton**, England; CORE, **Catholic University of Louvain**, Belgium; Department of Economics, **Columbia University**; Department of Economics, **ITAM**, Mexico; Department of Economics, **University of Rochester** ; Simon School of Business, **University of Rochester** ; Watson Research Center, **IBM**; Department of Economics, **University of North Carolina, Chapel-Hill**; Fuqua School of Business, **Duke University**; Smith School of Business, **University of Maryland**; Shannon Labs, **AT & T**; Department of MSIS, Smeal School of Business, **Pennsylvannia State University**; Department of Computer Science, **Carnegie-Mellon University**; Department of Computer Science, **University of California, Santa Barbara**; Department of Economics, **Harvard University**; Department of Economics, **Rice University**; Department of Economics, **New York University**; Department of Quantitative Economics, **University of Maastricht**; Department of Mathematics, **Technical University of Munich**; Anderson School of Management, **UCLA**; Theory Group, **Microsoft Research**; SISL laboratory, **California Institute of Technology**; Department of Computer Science, **Harvard University**; Department of Economics, **University of Montreal**; Department of Industrial Engineering and Operations Research, **Columbia University**; Department of Machine Learning, **Carnegie-Mellon University**; Stern School, **New York University**; *Mallinvauld* seminar, **Paris School of Economics**; Department of Mathematics, **LSE**; Department of Management, **LSE**; Department of Economics, **Cambridge University**; Department of Economics, **Oxford University**; Department of Economics & STIET, **University of Michigan**; Department of Economics, **Sabanci University**; Department of Economics, **Koc University**; Department of Information and Operations, **Marshall School, University of Southern California**; *Jocs* seminar, Barcelona; Department of Economics, **University of Maryland**; Department of Economics, **Bocconi University**; Department of Economics, **University of**

Minnesotta; Department of Economics, **University of Pittsburgh**, Department of Economics, **University of Pennsylvannia**, Department of Operations and Management Science, **Ross School**, **University of Michigan**, Department of Economics, **Indian Statistical Institute**.

Consulting

- Kraft General Foods (1993, 1994)
- Manugistics (1996)
- Banc One (1996)
- Advisory board of COMBINE NET. (2002-2005)
- Advisory board of Visiline. (2002-2003)
- The Tribune Media Company (2005)
- Hindustan Times Media Company (2005)
- Microsoft Research (2004, 2005, 2006, 2008, 2009, 2010, 2011)