

## Timothy Van Zandt

### Address

Economics and Political Science  
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### Education

Ph.D. in Economics, University of Pennsylvania, December 1989. Dissertation: *Essays on the Costly Acquisition of Information*. Supervisor: Beth Allen.

B.A. in Economics and International Relations, University of Pennsylvania, August 1985.

Visiting Student, National University of Colombia, Bogotá, 1981–1983.

Visiting Student, SUNY Stony Brook Program of Studies in Colombia, Bogotá, 1980–1981.

### Main academic appointments

Professor of Economics, INSEAD, France. 1998–present. (Associate Professor 1998-2000.) Shell Fellow of Economic Transformation.

Assistant Professor, Princeton University, Department of Economics. 1990–1998.

### Shorter-term academic appointments

Visiting Scholar, Department of Economics, Columbia University. 2010-2011.

Visiting Professor, Department of Economics, Stern School of Business, New York University. 2003–2004.

Visitor, School of Social Science, Institute for Advanced Study, Princeton, New Jersey. 2003–2004.

Visiting Professor, Department of Economics, Yale University. Spring 2002.

Visiting Professor, Universidad Carlos III, Madrid. November 1999.

Visiting Research Professor, Center for Mathematical Studies in Economics and Managerial Science, Northwestern University. 1998–1999.

Visiting Research Fellow, Center for Operations Research and Econometrics, Université Catholique de Louvain, Belgium. Academic year 1993-1994.

Post-Doctoral Member Technical Staff, AT&T Bell Laboratories, Mathematical Sciences Center, Murray Hill, New Jersey. 1989–1990.

### **Other academic appointments**

Research Fellow, Center of Economic Policy Research. 2000–present.

### **Research interests**

Microeconomic theory, bounded rationality (learning, information processing and communication), economics of organizations, mathematical economics.

### **Teaching interests and experience**

**Main teaching interests:** Managerial economics, economics of uncertainty and information, theory of organizations, game theory, microeconomic theory, finance, mathematical economics.

**Undergraduate teaching:** Economics of uncertainty and information. Intermediate microeconomics. Advising of junior and senior independent work.

**MBA teaching:** Managerial economics. Game theory. *One of three nominees for Best Core Course Teacher Award at INSEAD 2003.*

**Executive:** Pricing and competitive strategy. Market dynamics and investment cycles. Financial crisis. Macroeconomic growth.

**Doctoral teaching experience:** First year: All aspects of first-year microeconomics core (including general equilibrium theory and information economics), game theory, and mathematics for economists. Second year: Organization theory, decision theory, general equilibrium theory, and finance (asset pricing under symmetric and asymmetric information). Working groups: Evolutionary game theory, computational economics, and logical foundations of decision theory. Research seminars: microeconomic theory.

### **Academic advising and administration**

Director, PhD Program, INSEAD, 2011–present.

Departmental Representative, Princeton University, 1994–1998.

Political Economy Adviser, Princeton University, 1990–1992 and 1997–1998.

Junior Representative, Princeton University, 1990–1992.

### **Awards and fellowships**

Carey Polk Prize, 1990, University of Pennsylvania.

(Awarded by department for best dissertation.)

University Fellowship, Spring 1985, 1988-1990, University of Pennsylvania.

(Awarded by university.)

Weintraub Award, 1988, University of Pennsylvania

(Awarded by department for outstanding work in economic theory.)

Dean's Scholar Award, 1987–1988, University of Pennsylvania.

(Full-year fellowship, 10 awarded each year by Dean of Arts and Sciences.)

Lawrence Robbins Prize, 1985, University of Pennsylvania.

(Awarded by department to best first-year doctoral student.)

### External Research grants

National Science Foundation Research Grant IRI-9711303. 1997–2000. (US\$137,660)  
Information Processing and Incentives in Markets and Bureaucracies.

National Science Foundation Research Grant SES-9223917, 1993–1995. (US\$67,629)  
Information Processing and Returns to Scale in Organizations.

National Science Foundation Research Grant SES-9110973, 1991–1992. (US\$39,671)  
Information Processing in Firms.

### Publications in journals

“A Theorem of the Maximin and Applications to Bayesian Zero-Sum Games.” 2011.  
With Kaifu Zhang. *International Journal of Game Theory*. 40:289–308.

“Interim Bayesian Nash Equilibrium on Universal Type Spaces for Supermodular Games.” 2010. *Journal of Economic Theory*. 145:249–263.

“Setting Price or Quantity: Depends on What the Seller is Uncertain About.” 2010.  
With Paddy Padmanabhan and Ilia Tsetlin. *Quantitative Economics and Marketing*. 8:35–60.

“Monotone Equilibria in Bayesian Games of Strategic Complementarities.” 2007.  
With Xavier Vives. *Journal of Economic Theory*. 134:339–360.

“Information Overload in a Network of Targeted Communication.” 2004. *Rand Journal of Economics*. 35:542–560.

“Robustness of Adaptive Expectations as an Equilibrium Selection Device.” 2003.  
*Macroeconomic Dynamics*. 7:89–118.

“Information, Measurability and Continuous Behavior.” 2002. *Journal of Mathematical Economics*. 38:293–309.

“Real-Time Decentralized Information Processing and Returns to Scale.” 2001. With Roy Radner. *Economic Theory*. 17:497–544.

“Real-Time Decentralized Information Processing as a Model of Organizations with Boundedly Rational Agents.” 1999. *Review of Economic Studies*. 66:633–658.

“Berge's Maximum Theorem with Two Topologies on the Action Set.” 1998. With Anthony Horsley and Andrew Wrobel. *Economic Letters*. 61:285–291.

“Managerial Costs for One-Shot Decentralized Information Processing.” 1998. With Kieron Meagher. *Review of Economic Design*. 3:329–345.

“The Scheduling and Organization of Periodic Associative Computation: Efficient Networks.” 1998. *Review of Economic Design*. 3:93–127.

- “The Scheduling and Organization of Periodic Associative Computation: Essential Networks.” 1997. *Review of Economic Design*. 3:15–27.
- “Hidden Information Acquisition and Static Choice.” 1996. *Theory and Decision*. 40:235–247.
- “Continuous Approximations in the Study of Hierarchies.” 1995. *Rand Journal of Economics*. 26:575–590.
- “The Hausdorff Metric of  $\sigma$ -Fields and the Value of Information.” 1993. *The Annals of Probability*. 21:161–167.
- “Information Processing in Firms and Returns to Scale.” 1992. With Roy Radner. *Annales d’Economie et Statistique*. No. 25/26:265–298. (Reprinted in *The Economics of Informational Decentralization: Complexity, Efficiency and Stability*, Norwell, MA: Kluwer Academic Press, 1995.)
- “Uniform Continuity of Information Combination: A Corrigendum.” 1992. With Beth Allen. *Journal of Mathematical Economics*. 21:453–460.

#### Chapters in refereed conference proceedings

- “Communication Complexity and Mechanism Design.” 2007. *Journal of the European Economic Association*. 5:543–553. (Invited paper at the 2006 Congress of the European Economic Association, Vienna.)
- “Decentralized Information Processing in the Theory of Organizations.” 1999. *Contemporary Economic Issues, Volume 4: Economic Behaviour and Design*, edited by Murat Sertel. London: MacMillan Press Ltd. (Invited paper at the 1995 World Congress of the International Economic Association, Tunis.)
- “Hierarchical Computation of the Resource Allocation Problem.” 1995. *European Economic Review*. 39:700–708. (Invited paper at the 1994 Congress of the European Economic Association.)

#### Chapters in books

- “Hierarchy Size and Environmental Uncertainty.” 2003. With Kieron Meagher and Hakan Orbay. *Advances in Economic Design*, edited by Murat Sertel and Semih Koray. Berlin: Springer-Verlag.
- “Organizations with an Endogenous Number of Information Processing Agents.” 1998. *Organizations with Incomplete Information*, edited by Mukul Majumdar. Cambridge: Cambridge University Press.
- “Expected Utility.” 2009. With Simon Grant. *Handbook of Rational and Social Choice*, edited by Paul Anand, Clemens Puppe, and Prasanta Pattanaik. Oxford: Oxford University Press.

#### Working papers

- “Real-Time Hierarchical Resource Allocation.” 2003.

“Real-Time Hierarchical Resource Allocation with Quadratic Payoffs.” 2003.

“Balancedness of Real-Time Hierarchical Resource Allocation.” 2003.

“Structure and Returns to Scale of Real-Time Hierarchical Resource Allocation.” 2003.

“Market-Contingent Managerial Hierarchies.” 2006. With Kieren Meagher and Hakan Orbay.

### **Current research projects**

“Reclassification risk.”

“Hierarchy: Decentralized Coordination in Organizations.” With Luis Garicano. Chapter for the forthcoming *Handbook of Organizational Economics*, edited by Robert Gibbons and John Roberts. Princeton University Press.

“Trade Diversification and Economic Development.” With Pushan Dutt and Ilian Mihov.

“Local Network Externalities.” With Kaifu Zhang.

### **Textbooks in preparation**

*Introduction to the Economics of Uncertainty and Information*. Advanced undergraduate textbook. Manuscript under contract for publication by Oxford University Press.

*Firms, Prices, and Markets*. MBA managerial economics textbook. Draft.

### **Conference organization**

CEPR European Summer Symposium in Economic Theory, Gerzensee, Switzerland, 2007–present. Organization committee. (Organizer of Week 1 in 2008.)

ACM Conference on Electronic Commerce, New York 2004, Evanston 2008, Cambridge 2010. San Jose 2011. Program committee.

INSEAD Workshop on Games and Social Networks, June 2007. Co-organizer.

EEA Annual Congress, Vienna, 2006. Session Organizer: “Communication and Complexity in Organizations.”

EEA Annual Congress, Vienna 2006, Budapest 2007, Milan 2008, Barcelona 2009, Glasgow 2010. Program committee.

SITE Workshop on Bounded Rationality in the Design of Markets and Organizations, Stanford University, 2004. Co-organizer.

Econometric Society Summer Meeting, Lausanne 2001, Venice 2002, Madrid 2004, Barcelona 2009, Oslo 2011. Program committee.

Conference on Economic Design, Istanbul, 2000. Co-organizer of two special sessions.

CEPR European Summer Symposium in Economic Theory, Gerzensee, Switzerland, 1999. Focus session organizer.

CEPR Conference on Information Processing Organizations, Brussels, 1999. Co-organizer.

### **Invited conference presentations and special lectures**

Information, Control and Communication: A Transdisciplinary Workshop, Die Junge Akademie, Deutsche Forschungsgemeinschaft. Berlin, 2008. "Complexity, Bounded Rationality, and Information Processing in Economic Decision Making."

Universidad Nacional de Colombia and Universidad Externado de Colombia, V National Symposium on Microeconomics, 2007. "Strategic Complementarities and Monotone Comparative Statics" (tutorial).

Dagstuhl seminar on Computational Social Systems and the Internet, 2007. "Interplay between Incentives and Communication Complexity in Mechanism Design."

NBER Organizational Economics Working Group Handbook Project, 2006. "Hierarchy: Decentralization Coordination in Organizations".

EEA Annual Congress, Vienna, 2006. "Communication Complexity in Mechanism Design."

New York University Center for Digital Economy Research, Summer Workshop on the Economics of Information Technology, 2005. "Information Processing and Organizations." x New York University Center for Digital Economy Research, Summer Workshop on the Economics of Information Technology, 2005. "Information Processing and Organizations."

CEPR European Summer Symposium in Economic Theory, Gerzensee, Switzerland, 2003. "Communication Complexity and Mechanism Design."

Hebrew University IAS Summer School in Economic Theory, 2003. "Decentralizing the Firm to Cope with Complexity."

INFORMS Computational and Mathematical Organization Theory, 1997 annual workshop. "Real-Time Hierarchical Resource Allocation."

Workshop on Incentives and Organizations, University of Copenhagen, 1996. "Real-Time Hierarchical Resource Allocation."

Columbia University Workshop on Telecommunications, Network Games and Economic Organizations: The Interface, 1996. "Real-Time Hierarchical Resource Allocation."

Society for Computational Economics, 1995. "Parallel Computation in the Theory of Organizations."

XI World Congress of the International Economic Association, 1995. "Decentralized Information Processing in the Theory of Organizations."

Annual Congress of the European Economic Association, 1994. "Hierarchical Computation of the Resource Allocation Problem."

**Conference presentations – contributed papers**

- “Trade Diversification and Growth.” 2011 PET Conference on the Political Economy of Development. Chulalongkorn University, Bangkok.
- “Interim Bayesian Nash Equilibrium on Universal Type Spaces for Supermodular Games.” 2007 Conference on Complementarities and Information, IESE, Spain.
- “Interaction between Incentives and Communication Complexity in Mechanism Design.” 2005 Conference of the Society for the Advancement of Economic Theory, Vigo, Spain. 2007 Decentralization Conference, University of Michigan. 2007 Latin American Meeting of the Econometric Society, Bogotá, Colombia. 2008 Society for Economic Dynamics, Cambridge MA.
- “Players as Serial or Parallel Random Access Machines.” 2005 DIMACS Workshop on Bounded Rationality, Rutgers University. 2005 Conference of the Society for the Advancement of Economic Theory, Vigo, Spain.
- “Monotone Equilibria in Bayesian Games of Strategic Complementarities.” Second World Congress of the Game Theory Society, Marseille, 2004. HEC Economic Theory Conference, Paris, 2005.
- “Market-Contingent Managerial Hierarchies.” 2002 North American Summer Meeting of the Econometric Society, UCLA.
- “Robustness of Adaptive Expectations as an Equilibrium Selection Device.” 1999 Midwest Macroeconomics Conference, University of Pittsburgh. 2000 NBER-NSF General Equilibrium Conference, New York University. 2000 CEPR European Summer Symposium in Economic Theory, Gerzensee.
- “Real-Time Hierarchical Resource Allocation.” 1995 NBER-NSF Decentralization Conference, University of Illinois. 1995 Midwest Mathematical Economics Conference, University of Minnesota. 1996 North American Summer Meeting of the Econometric Society, University of Iowa. 1997 Northwestern Summer Workshop in Economic Theory, Northwestern University. 1997 Economic Theory Conference, Antalya.
- “Real-Time Information Processing and Returns to Scale in Statistical Decision Problems.” 1993 NBER-NSF Decentralization Conference, University of California at Berkeley. 1993 Stony Brook Workshop on Game Theory and Computation, SUNY at Stony Brook.
- “Information Processing and Returns to Scale.” 1992 NBER-NSF Decentralization Conference, University of Arizona. 1992 Summer in Theory Workshop, Tel Aviv University. 1992 Winter Meeting of the Econometric Society, New Orleans.
- “Information Overload in a Network of Targeted Communication.” 1990 NBER-NSF Decentralization Conference, Northwestern University. 1990 World Congress of the Econometric Society, Barcelona.

**Seminar presentations**

**North America:** Harvard University (economics department and business school), Massachusetts Institute of Technology (economics department and business

school), Princeton University, Yale University, Stanford University (department of economics and business school), California Institute of Technology, University of California San Diego, University of California Berkeley, University of California Davis, University of Rochester, Boston University, Columbia University (Department of Economics, Graduate School of Business, and School of International Public Affairs), John Hopkins University, New York University (economics department and business school), University of Michigan (economics department and School of Information), University of Pennsylvania, University of Maryland, Purdue University, Northwestern University, University of Minnesota, University of Alabama, Rice University, Rutgers University, SUNY at Stony Brook, University of Arizona, University of Illinois Champaign-Urbana, University of British Columbia, Queens University, University of Toronto, Simon Fraser University, Instituto Tecnológico Autónomo de México, Arizona State University, Baruch College, University of Wisconsin.

**Europe:** Oxford University, Cambridge University, European Central Bank, London School of Economics, Southampton University, Tilburg University, Universität Bonn, Université de Louvain, Université Libre de Bruxelles, Universidad Carlos III de Madrid, Universitat Pompeu Fabra, European University Institute, Universitat Autònoma de Barcelona, Universidad de Alicante, Université de Toulouse 1, Université de Paris I, Ecole Polytechnique, DELTA/CERAS, INSEAD, Economics Institute-CERGE, HEC, Rotterdam, Université Aix Marseille II, Université de Bourgogne, University College London, University of Mannheim.

### Professional activities

Fellow of the Society for the Advancement of Economic Theory, 2011–present.

**NSF Review Panelist**, 1999, 2001, 2002, 2003, 2005.

**Associate Editor and Production Editor** for the *Journal of the European Economic Association*, 2002–present.

**Associate Editor**, *Mathematical Social Sciences*, 2007–present.

**Associate Editor**, *Economic Bulletin*, 2011–present.

**Referee** for *American Economic Review*, *B.E. Journals in Theoretical Economics*, *B.E. Journals in Economic Analysis and Policy*, *Computational Economics*, *Computational and Mathematical Organization Theory*, *Econometrica*, *Economica*, *Economic Design*, *Economic Inquiry*, *The Economic Journal*, *Economic Letters*, *Economic Theory*, *European Economic Review*, *Games and Economic Behavior*, *International Journal of Industrial Organization*, *Journal of Economic Dynamics and Control*, *Journal of Economic Theory*, *Journal of Economics and Management Strategy*, *Journal of the European Economic Association*, *Journal of Law, Economics and Organization*, *Journal of Mathematical Economics*, *Management Science*, *Managerial and Decision Economics*, *Quarterly Journal of Economics*, *Rand Journal of Economics*, *Review of Economic Design*, *Review of Economic Studies*, *Scandinavian Journal of Economics*, *Social Choice and Welfare*, and *Theory and Decision*.



**Reviewer** for Academic Press, Cambridge University Press, Econometric Society Monograph Series, Israeli National Science Foundation, Kluwer Academic Publishers, National Academy of Science, National Science Foundation, Oxford University Press, Prentice-Hall.

**University service**

Faculty Evaluation Committee, INSEAD, 2005–2007, 2008–2010 (chair in 2009–2010).

Ph.D. Committee, INSEAD, 1999–2001, 2004–2010.

Area Coordinator, Economics and Political Science, INSEAD, 2001–2005, 2008–2010.

Co-organizer of the HEC-PSE-INSEAD joint conference, 2006–2009.

MBA Committee, INSEAD, 2008–2009.

MBA Admissions Committee, INSEAD, 2007–2008.

MBA Diploma Committee, INSEAD, 2000–2003, 2004–2005.

Task Force on Research Productivity (Chair), INSEAD, 2002–2003.

R&D Committee, INSEAD, 2001–2003.

Faculty Committee on Computing, Princeton University, 1996–1998.

Interdepartmental Committee for the Financial Research Center, Princeton University, 1997–1998.

Various departmental committees, Princeton University, 1990–1998.

**Languages**

English (native), Spanish (fluent), French (working knowledge).

**Other projects**

Author of PStricks and Seminar (1993).