

Myong-Hun Chang

Department of Economics • Cleveland State University
2121 Euclid Avenue • RT 1719 • Cleveland, OH 44115

Email: m.chang@csuohio.edu • Phone: (216) 687-4523 • Fax: (216) 687-9206

Webpage: <http://academic.csuohio.edu/changm>

EDUCATION

1988: Ph.D., Economics, The Johns Hopkins University

1987: M.A., Economics, The Johns Hopkins University

1984: B.S., Operations Research & Industrial Engineering, Cornell University

PRINCIPAL ACADEMIC APPOINTMENTS

2004-Present: Chairman, Department of Economics, Cleveland State University

2004-Present: Professor, Department of Economics, Cleveland State University

1989-Present: Graduate Faculty, Cleveland State University

1993-2004: Associate Professor, Department of Economics, Cleveland State University

1988-1993: Assistant Professor, Department of Economics, Cleveland State University

SHORTER-TERM ACADEMIC APPOINTMENTS

1-6/1999: Visiting Associate Professor, Owen Graduate School of Management, Vanderbilt University

1-6/1995: Visiting Associate Professor, Department of Economics, The Johns Hopkins University

PROFESSIONAL SERVICES AND AFFILIATIONS

2007: Member, Davidson Fellows Review Committee, Davidson Institute

2007: Member, Grant Review Panel, *Human and Social Dynamics* Program, National Science Foundation

2006: Member, Davidson Fellows Review Committee, Davidson Institute

2006: Member, International Scientific Committee, Third Workshop of Society for Computational Economics on *Complex Behavior in Economics: Modeling, Computing, and Mastering Complexity*, Aix-en-Provence, France

2004: Member, Grant Review Panel, *Human and Social Dynamics* Program, National Science Foundation

2003: Member, International Scientific Committee, Second Workshop of Society for Computational Economics on *Complex Behavior in Economics: Modeling, Computing, and Mastering Complexity*, Aix-en-Provence, France

TEACHING EXPERIENCE

Cleveland State University: 1988-Present

Industrial Organization (Undergraduate)

Principles of Microeconomics (Undergraduate)

Intermediate Microeconomics (Undergraduate)

Public Regulation of Business (Undergraduate)

Managerial Economics (Undergraduate)

Game Theory & Business Strategy (Undergraduate)

Game Theory and Social Science (Undergraduate, Honors)

Industrial Organization (Graduate - MA)

Competition & Strategy (Graduate - MA)

Microeconomics for MBAs (MBA)
 Managerial Economics (MBA)

Johns Hopkins University: 1995
 Elements of Microeconomics (Undergraduate)
 Economics of Regulation (Undergraduate)

Vanderbilt University (Owen Graduate School of Management): 1999
 Game Theory & Business Strategy (MBA)

RESEARCH INTERESTS

Industrial Organization, Microeconomic Theory, Computational Economics, Organization Theory,
 Competitive Strategy, Social Networks

RESEARCH GRANTS AND AWARDS

2008-2011: Faculty Research Development Grant for *A Computational Model of Industry Evolution*,
 Cleveland State University
 2000-2002: National Science Foundation Research Grant (SES-0078752) for *Computational Modeling of
 Multi-Level/Multi-Unit Organizations*, Co-Principal Investigator (joint with Joseph E.
 Harrington, Jr.)
 1989-1990: Research and Creative Activities Grant for *Exclusive Dealing Contracts and Market Foreclosure*,
 Cleveland State University
 6-8/1989: Research Challenge Grant, Cleveland State University

PUBLICATIONS

2012 “Competition Policy,” forthcoming in *The Palgrave Encyclopedia of Strategic Management*, David J. Teece
 and Mie Augier (eds.), Macmillan
 2011 “Emergent Social Learning Networks in Organizations with Heterogeneous Agents,” *Advances in
 Complex Systems*, 14 (2011), 169-199
 2011 “Entry, Exit, and the Endogenous Market Structure in Technologically Turbulent Industries,” *Eastern
 Economic Journal*, 37 (2011), 51-84 [Symposium Issue on Agent-Based Computational Economics]
 2011 “Agent-Based Modeling and Computational Experiments in Industrial Organization: Growing Firms
 and Industries *in silico*,” *Eastern Economic Journal*, 37 (2011), 28-34 [Symposium Issue on Agent-Based
 Computational Economics]
 2009 “Modeling the Birth and Death of Cartels with an Application to Evaluating Competition Policy,”
 (with Joseph E. Harrington, Jr.), *Journal of the European Economic Association*, 7 (2009), 1400-1435
 2009 “Industry Dynamics with Knowledge-Based Competition: A Computational Study of Entry and Exit
 Patterns,” *Journal of Economic Interaction and Coordination*, 4 (2009), 73-114
 2007 “Innovators, Imitators, and the Evolving Architecture of Problem-Solving Networks,” (with Joseph
 E. Harrington, Jr.), *Organization Science*, 18 (2007), 648-666

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- 2007 “Decentralization,” in: Stewart Clegg and James R. Bailey, editors, *International Encyclopedia of Organization Studies*, Volume 1 (2007), SAGE Publications, Thousand Oaks, CA, 359-362
- 2006 “Agent-Based Models of Organizations,” (with Joseph E. Harrington, Jr.), in: Tesfatsion, Leigh and Kenneth L. Judd, eds., *Handbook of Computational Economics II: Agent-Based Computational Economics*, Elsevier (2006), 1273-1337
- 2005 “Discovery and Diffusion of Knowledge in an Endogenous Social Network,” (with Joseph E. Harrington, Jr.), *American Journal of Sociology*, 110 (2005), 937-976
- 2005 “Co-Evolution of Firms and Consumers and the Implications for Market Dominance,” (with Joseph E. Harrington, Jr.), *Journal of Economic Dynamics and Control*, 29 (2005), 245-276
- 2004 “Organization of Innovation in a Multi-Unit Firm: Coordinating Adaptive Search on Multiple Rugged Landscapes,” (with Joseph E. Harrington, Jr.), in: William Barnett, Christophe Deissenberg, and Gustav Feichtinger, editors, *Economic Complexity: Non-linear Dynamics, Multi-agents Economies, and Learning*, International Symposia on Economic Theory and Econometrics, Volume 14 (2004), Elsevier, Amsterdam, 189-214
- 2003 “Multi-Market Competition, Consumer Search, and the Organizational Structure of Multi-Unit Firms,” (with Joseph E. Harrington, Jr.), *Management Science*, 49 (2003), 541-552
- 2002 “Decentralized Business Strategies in a Multi-Unit Firm,” (with Joseph E. Harrington, Jr.), *Annals of Operations Research*, 109 (2002), 77-98
- 2000 “Centralization vs. Decentralization in a Multi-Unit Organization: A Computational Model of a Retail Chain as a Multi-Agent Adaptive System,” (with Joseph E. Harrington, Jr.), *Management Science*, 46 (2000), 1427-1440
- 1998 “Product Switching Cost and Strategic Flexibility,” *Journal of Economics and Management Strategy*, 7 (1998), 461-488
- 1997 “Organizational Structure and Firm Innovation in a Retail Chain,” (with Joseph E. Harrington, Jr.), *Computational and Mathematical Organization Theory*, 3 (1997), 267-288
- 1996 “The Interactive Effect of Product Differentiation and Cost Variability on Profit,” (with Joseph E. Harrington, Jr.), *Journal of Economics and Management Strategy*, 5 (1996), 175-193
- 1993 “Flexible Manufacturing, Uncertain Consumer Tastes, and Strategic Entry Deterrence,” *Journal of Industrial Economics*, XLI (1993), 77-90
- 1992 “Inter-temporal Product Choice and Its Effects on Collusive Firm Behavior,” *International Economic Review*, 33 (1992), 773-793
- 1992 “Exclusive Dealing Contracts in a Successive Duopoly with Side Payments,” *Southern Economic Journal*, 59 (1992), 180-193
- 1991 “The Effects of Product Differentiation on Collusive Pricing,” *International Journal of Industrial Organization*, 9 (1991), 453-469

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- 1988 “The Effects of Irreversible Investment in Durable Capacity on the Incentive for Horizontal Merger,” (with Joseph E. Harrington, Jr.), *Southern Economic Journal*, 55 (1988), 443-453

BOOK REVIEW

- 2012 Review of *Game Theory: A Nontechnical Introduction to the Analysis of Strategy* by Roger A. McCain, *Eastern Economic Journal*, forthcoming

WORKING PAPERS

- 2011 “Computational Industrial Economics: A Generative Approach to Dynamic Analysis in Industrial Organization,” December 2011
- 2011 “Muddling through the Gales of Creative Destruction: A Non-Equilibrium Computational Model of Schumpeterian Competition,” November 2011
- 2010 “The Impact of a Corporate Leniency Program on Antitrust Enforcement and Cartelization” (with Joseph E. Harrington, Jr.), February 2009 [Revised: April 2010]
- 2007 “Partition and Delegate: A Computational Algorithm for Generating Nested Organizational Hierarchies with a Fixed Number of Tasks,” June 2007
- 2007 “Individual Learning and Social Learning: Endogenous Division of Cognitive Labor in a Population of Co-evolving Problem-Solvers,” (with Joseph E. Harrington, Jr.), January 2007
- 2001 “Co-Evolution of Firms and Consumers and the Implications for Market Dominance,” (with Joseph E. Harrington, Jr.), *Center on Social and Economic Dynamics Working Paper Series No. 23*, The Brookings Institution, October 2001
- 2000 “Centralization vs. Decentralization in a Multi-Unit Organization: A Computational Model of a Retail Chain as a Multi-Agent Adaptive System,” (with Joseph E. Harrington, Jr.), *Santa Fe Institute Working Paper 00-02-010*, 2000

WORK IN PROGRESS

1. “Growth, Size, and Age of Firms in Turbulent Industries”
2. “Endogenous R&D in Markets with Fluctuating Demand”
3. “A Computational Model of Entrepreneurship and Business Dynamics”
4. “Recursively Nested Organizational Hierarchies: Information Processing and Coordination”

REFEREE/REVIEWER ACTIVITIES

Journals: *American Economic Review*, *American Journal of Sociology*, *Annals of Operations Research*, *Canadian Journal of Economics*, *Central European Journal of Operations Research*, *Computational Economics*, *Computational Management Science*, *Computational and Mathematical Organization Theory*, *Ecology and Society*, *Economic Journal*, *Economic Inquiry*, *Economic Theory*, *Economics (e-journal)*, *International Economic Review*, *International Journal of Industrial Organization*, *Journal of Economic Behavior and Organization*, *Journal of Economic Dynamics and Control*, *Journal of Economic Interaction and Coordination*, *Journal of Economics and Business*, *Journal of Economics and Management Strategy*, *Journal of Economic Theory*, *Journal of Industrial Economics*, *Management Science*, *Managerial and Decision Economics*, *Marketing Science*, *Organization Science*, *Quarterly Journal of Business*

and Economics, RAND Journal of Economics, Review of Economic Studies, Review of Industrial Organization, Southern Economic Journal, Zeitschrift Für Nationalökonomie

Publishers: Cambridge University Press, Harper Collins Publishers, John Wiley & Sons, Inc., Addison Wesley Longman, Prentice Hall, MIT Press, Stanford University Press

Foundations: National Science Foundation (USA)

External Reviewer on Tenure/Promotion Cases:

Fordham University
Rutgers University (Newark)
University of Akron

SEMINARS AND CONFERENCE PRESENTATIONS (SINCE 1999)

- 6/2012: 18th International Conference on Computing in Economics and Finance, Society for Computational Economics, Prague, Czech Republic, “Muddling through the Gales of Creative Destruction: A Non-Equilibrium Computational Model of Schumpeterian Competition” [Scheduled]
- 6/2012: 17th Workshop on Economic Heterogeneous Interacting Agents (WEHIA), University of Pantheon-Assas, Paris II, Paris, France, “Computational Industrial Economics: A Generative Approach to Dynamic Analysis in Industrial Organization” [Scheduled]
- 3/2012: 38th Eastern Economic Association Annual Conference, Boston, Massachusetts, “Muddling through the Gales of Creative Destruction: A Non-Equilibrium Computational Model of Schumpeterian Competition”
- 4/2011: 9th Annual International Industrial Organization Conference, Boston, Massachusetts, “Schumpeterian Competition with Myopic but Adaptive Firms: Endogenous R&D and Industrial Structure”
- 2/2011: Eastern Economic Association Annual Conference, New York City, New York, “A Computational Model of Schumpeterian Competition with Myopic but Adaptive Firms”
- 7/2010: 16th International Conference on Computing in Economics and Finance, Society for Computational Economics, London, England, “Entry, Exit, and the Endogenous Market Structure in Technologically Turbulent Industries”
- 5/2010: 8th Annual International Industrial Organization Conference, University of British Columbia, Vancouver, Canada, “Entry, Exit, and the Endogenous Market Structure in Technologically Turbulent Industries”
- 5/2010: International Workshop on Emergent Intelligence on Networked Agents (WEIN 2010), Toronto, Canada, “Emergent Social Learning Networks in Organizations with Heterogeneous Agents”
- 4/2010: Department of Economics, Youngstown State University, “Entry, Exit, and the Endogenous Market Structure in Technologically Turbulent Industries”
- 3/2010: Midwest Economics Association Conference 2010, Evanston, Illinois, “Firm Turnovers and the Endogenous Market Structure in Technologically Turbulent Industries with Heterogeneous Firms”
- 9/2009: Department of Economics, Kent State University, “Firm Turnovers and the Endogenous Market Structure in Technologically Turbulent Industries with Heterogeneous Firms”
- 7/2007: The 25th International Conference of the System Dynamics Society, Boston, Massachusetts, “Non-Equilibrium Industry Dynamics with Knowledge-Based Competition: An Agent-Based Computational Model”
- 2/2007: Eastern Economic Association Annual Conference, New York City, New York, “Non-Equilibrium Industry Dynamics with Knowledge-Based Competition: An Agent-Based Computational Model”
- 9/2006: Third Conference on *Mathematical Methods in Counter-Terrorism*, The Institute of World Politics, Washington, D.C., “Discovery and Diffusion of Knowledge in an Endogenous Social Network”

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- 5/2006: Third International Meeting of *Complexity 2006*, Aix-en-Provence, France, “Individual Learning and Social Learning: Endogenous Division of Cognitive Labor in a Population of Co-evolving Problem-Solvers” (Invited Session, Session Organizer, Session Chair)
- 11/2005: Annual Meeting of the *Southern Economic Association*, Washington, D.C., “Innovators, Imitators, and the Evolving Architecture of Social Networks”
- 7/2005: *Social Network Analysis: Advances & Empirical Applications*, Oxford University, England, “Innovators, Imitators, and the Evolving Architecture of Social Networks”
- 6/2005: *North American Association for Computational Social and Organizational Science* Conference, University of Notre Dame, “Innovators, Imitators, and the Evolving Architecture of Social Networks”
- 5/2004: *Handbook of Computational Economics* Conference, Center for the Study of Complex Systems, University of Michigan, “Agent-Based Models of Organizations”
- 10/2003: DePaul University, Department of Economics, “Discovery and Diffusion of Knowledge in an Endogenous Social Network”
- 5/2003: Second Workshop of the Special Interest Group on Economic Dynamics (Society for Computational Economics) on *Complex Behavior in Economics: Modeling, Computing, and Mastering Complexity*, Aix-en-Provence, France, “Discovery and Diffusion of Knowledge in an Endogenous Social Network”
- 6/2002: Computational and Mathematical Organization Theory Conference, Carnegie Mellon University, “Innovation versus Imitation in Stochastic Social Networks with Decentralized Reinforcement Learning”
- 5/2002: Lake Arrowhead Conference on Computational Social Science and Social Complexity, UCLA, “Learning from the Competition: External Spillovers and the Organizational Structures of Competing Multi-Unit Firms”
- 1/2002: North American Winter Meetings of the Econometric Society, Atlanta, GA, “Multi-Market Competition, Consumer Search, and the Organizational Structure of Multi-Unit Firms”
- 9/2001: Conference on *Managing Knowledge in Organizations: Creating, Retaining, and Transferring Knowledge*, GSIA, Carnegie Mellon University, “Consumer Search, Competition, and the Organizational Structure of Multi-Unit Firms”
- 6/2001: 7th International Conference of the Society of Computational Economics, Yale University, “Consumer Search, Competition, and the Organizational Structure of Multi-Unit Firms”
- 8/2000: World Congress of the Econometric Society, University of Washington (Seattle), “Centralization vs. Decentralization in a Multi-Unit Organization: A Computational Model of a Retail Chain as a Multi-Agent Adaptive System”
- 7/2000: Computational Social and Organizational Science Conference, Carnegie Mellon University, “Competition and the Organizational Structure of Multi-Unit Firms”
- 5/2000: *Complex Behavior in Economics* workshop, Aix-en-Provence, France, “Centralization vs. Decentralization in a Multi-Unit Organization: A Computational Model of a Retail Chain as a Multi-Agent Adaptive System”
- 6/1999: Society for Computational Economics Conference, Boston College, “Organizational Structure and Perpetual Innovation: A Computational Model of a Retail Chain”
- 5/1999: Computational and Mathematical Organization Theory Workshop, INFORMS (Institute for Operations Research and the Management Sciences) 1999 Meetings, Cincinnati, OH, “Organizational Structure and Perpetual Innovation: A Computational Model of a Retail Chain”
- 1/1999: Owen Graduate School of Management, Vanderbilt University, “Organizational Structure and Perpetual Innovation: A Computational Model of a Retail Chain”

MISCELLANEOUS

- 12/2010: Invited Lecture, “Collective Action in Large Groups,” Cuyahoga Community College – West Campus

4/2010: Invited Lecture, “Computational Modeling and Analysis in Economics,” Annual Lecture Series, *Ways of Knowing*, College of Liberal Arts and Social Sciences, Cleveland State University

1/2010: Invited Lecture, “Game Theory and Economics: Individual Choices and Social Consequences,” Scholars in STEM (Science, Technology, Engineering, and Mathematics) Program, Cleveland State University

REFERENCES

Available upon request.