

Michael R. Caputo

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Work Address:

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Education:

Ph.D., Economics, University of Washington, 1987.
M.A., Economics, University of Washington, 1985.
B.S. with Distinction and Magna Cum Laude, Economics, University of Delaware, 1983.

Employment History:

2003–present, Professor, Department of Economics, University of Central Florida
1996–2003, Professor, Department of Agricultural and Resource Economics, University of California Davis
1992–1996, Associate Professor, Department of Agricultural and Resource Economics, University of California Davis
1987–1992, Assistant Professor, Department of Agricultural and Resource Economics, University of California Davis

Fields of Specialization:

Microeconomic Theory, Natural Resource Economics, Differential Game Theory.

Courses Taught:

Undergraduate

Natural Resource and Environmental Economics
Linear Programming
Mathematical Economics
Intermediate Microeconomic Theory
Principles of Microeconomic Theory

Graduate

Microeconomic Theory
Static Optimization Theory
Dynamic Optimization Theory
Topics in Economic Theory
Mathematical Economics

Honors and Awards:

“2012 Excellence in Research Award,” University of Central Florida, College of Business Administration.

“2009 Excellence in Graduate Teaching Award,” University of Central Florida, College of Business Administration.

“Quality of Research Discovery Award” given by the American Agricultural Economics Association for the (2005) paper “An Atemporal Microeconomic Theory and an Empirical Test of Price-Induced Technical Progress,” *Journal of Productivity Analysis* 24, 259–281.

Academic Keys: Who’s Who in Social Sciences Higher Education, inducted 2004.

Academic Keys: Who’s Who in Business Higher Education, inducted 2003.

“Revealed Performances: Worldwide Rankings of the Economists and Economics Departments,” by Tom Coupe’—I was ranked 525 out of more than 113,000 economists (top 0.5%) using 1990–2000 data and 943 out of more than 55,000 economists (top 2%) using 1994–1998 data.

ANBAR Citation of Excellence and Highest Quality Rating for my (1998) paper “A Dual Vista of the Stackelberg Duopoly Reveals its Fundamental Qualitative Structure,” *International Journal of Industrial Organization* 16, 333–352.

Academic Keys: Who’s Who Among America’s Teachers, inducted 1998.

Henry C. Buechel Memorial Award for Distinguished Undergraduate Teaching, Department of Economics, University of Washington, 1986.

Graduate School Scholastic Achievement Award for Outstanding Academic Performance, University of Washington, 1985.

B.S. in Economics with Distinction and Magna Cum Laude, University of Delaware, 1983.

Distinguished Senior in Economics, Department of Economics, University of Delaware, 1983.

Achievement Award for Junior Economics Majors, Department of Economics, University of Delaware, 1982.

Dean’s List, University of Delaware, every semester, 9/79–6/83.

Honor Society of Phi Kappa Phi, University of Delaware, initiated 1983.

Honor Society of Beta Gamma Sigma, University of Delaware, initiated 1983.

Honor Society of Omicron Delta Epsilon, University of Delaware, initiated 1982.

Professional Service:

Associate Editor: *Mathematical Social Sciences*, 2011–present

Subject Editor: *Optimal Control Applications and Methods*, 2005–2012.

Editorial Council: *Journal of Environmental Economics and Management*, 1994–1996

Referee Duties: *American Economic Review*, *American Journal of Agricultural Economics*, *Environment and Development Economics*, *European Journal of Operational Research*, *Games and Economic Behavior*, *International Economic Review*, *International Journal of Industrial Organization*, *Journal of Comparative Economics*, *Journal of Economic Dynamics and Control*, *Journal of Environmental Economics and Management*, *Journal of Optimization Theory and Applications*, *Journal of Productivity Analysis*, *Journal of Public Economics*, *Optimal Control Applications and Methods*, *Southern Economic Journal*, and others

Book:

Caputo, Michael R. (2005), “Foundations of Dynamic Economics Analysis: Optimal Control Theory and Applications,” *Cambridge University Press*.

Refereed Journal Articles:

53. Caputo, Michael R. (2012), “Optimal Control and Resources,” forthcoming in *Encyclopedia of Energy, Natural Resource and Environmental Economics*

52. Ling, Chen and Michael R. Caputo (2012), “The Envelope Theorem for Locally Differentiable Nash Equilibria of Discounted and Autonomous Infinite Horizon Differential Games,” forthcoming in *Dynamic Games and Applications*

51. Caputo, Michael R. and Amnon Levy (2012), “A Theory of Mood-Influenced Consumption and Investment in Health,” *Mathematical Social Sciences* 63, 218–227.

50. Caputo, Michael R. (2011), "A Nearly Complete Test of a Capital Accumulating, Vertically Integrated, Nonrenewable Resource Extracting Theory of a Competitive Firm," *Resource and Energy Economics* 33, 725–744.
49. Ling, Chen and Michael R. Caputo (2011), "A Qualitative Characterization of Symmetric Open-Loop Nash Equilibria in Discounted Infinite Horizon Differential Games," *Journal of Optimization Theory and Applications* 149, 151–174.
48. Van Gorder, Robert A. and Michael R. Caputo (2010), "Envelope Theorems for Locally Differentiable Open-Loop Stackelberg Equilibria of Finite Horizon Differential Games," *Journal of Economic Dynamics and Control* 34, 1123–1139.
47. Caputo, Michael R. (2010), "The Testable Implications of a Capital Accumulating, Price Taking, Vertically Integrated, Nonrenewable Resource Extracting Model of the Firm," *Optimal Control Applications and Methods* 31, 5–27.
46. Caputo, Michael R. (2009), "A Unified View of Ostensibly Disparate Isoperimetric Variational Problems," *Applied Mathematics Letters* 22, 332–335.
45. Levy, Amnon and Michael R. Caputo (2008), "Optimal Control of Locusts in Subsistence Farming Areas," *European Journal of Operational Research* 191, 503–515.
44. Caputo, Michael R. (2008), "The Intrinsic Qualitative Properties of the Classical Optimal Timing Problem are Invariant to the Functional Form of the Discount Function," *Natural Resource Modeling* 21, 607–624.
43. Caputo, Michael R. and M. Hossein Partovi (2008), "Intrinsic Comparative Statics of a General Class of Profit-Maximizing Rate-of-Return Regulated Models of the Firm," *Oxford Economic Papers* 60, 369–382.
42. Caputo, Michael R. and Quirino Paris (2008), "Comparative Statics of the Generalized Maximum Entropy Estimator of the General Linear Model," *European Journal of Operational Research* 185, 195–203.
41. Caputo, Michael R. (2007), "The Envelope Theorem for Locally Differentiable Nash Equilibria of Finite Horizon Differential Games," *Games and Economic Behavior* 67, 198–224.
40. Caputo, Michael R. (2007), "The Lagrange Multiplier is Not the Shadow Value of the Limiting Resource in the Presence of Strategically Interacting Agents," *Economics Bulletin* 3, 1–8.
39. Partovi, M. Hossein and Michael R. Caputo (2007), "Existence of a Universal Comparative Statics Matrix for Differentiable Optimization Problems," *Economic Theory* 30, 385–394.
38. Partovi, M. Hossein and Michael R. Caputo (2006), "A Complete Theory of Comparative Statics for Differentiable Optimization Problems," *Metroeconomica* 57, 31–67. Also (2007), "Erratum" 58, 360.
37. Caputo, Michael R. and Quirino Paris (2005), "An Atemporal Microeconomic Theory and an Empirical Test of Price-Induced Technical Progress," *Journal of Productivity Analysis* 24, 259–281.
36. Partovi, M. Hossein and Michael R. Caputo (2004), "Principal Portfolios: Recasting the Efficient Frontier," *Economics Bulletin* 7, 1–10.
35. Caputo, Michael R. and Dean Lueck (2003), "Natural Resource Exploitation Under Common Property Rights," *Natural Resource Modeling* 16, 39–67.
34. Caputo, Michael R. (2003), "The Comparative Dynamics of Closed-Loop Controls for Discounted Infinite Horizon Optimal Control Problems," *Journal of Economic Dynamics and Control* 27, 1335–1365.
33. Paris, Quirino and Michael R. Caputo (2002), "Comparative Statics of Money-Goods Specifications of the Utility Function," *Journal of Economics* 77, 53–71.
32. Caputo, Michael R. and M. Hossein Partovi (2002), "Reexamination of the A-J Effect," *Economics Bulletin* 12, 1–9.

31. Paris, Quirino and Michael R. Caputo (2001), "Price-Induced Technical Progress and Comparative Statics," *Economics Bulletin* 15, 1–8.
30. Caputo, Michael R. (2001), "Further Results on Lagrange Multipliers with Several Binding Constraints," *Economics Letters* 70, 335–340.
29. Caputo, Michael R. (2000), "Lagrangian Transposition Identities and Reciprocal Pairs of Constrained Optimization Problems," *Economics Letters* 66, 265–273.
28. Caputo, Michael R. (1999), "Economic Characterization of Reciprocal Isoperimetric Control Problems Revisited," *Journal of Optimization Theory and Applications* 101, 723–730.
27. Caputo, Michael R. (1999), "The Relationship Between Two Dual Methods of Comparative Statics," *Journal of Economic Theory* 84, 243–250.
26. Caputo, Michael R. (1998), "Economic Characterization of Reciprocal Isoperimetric Control Problems," *Journal of Optimization Theory and Applications* 98, 325–350.
25. Caputo, Michael R. (1998), "A Dual Vista of the Stackelberg Duopoly Reveals its Fundamental Qualitative Structure," *International Journal of Industrial Organization* 16, 333–352.
24. Ghassemi, Justine S. and Michael R. Caputo (1997), "Abatement, Consumption, Capital and Pollution Accumulation in an Optimal Program," *Pacific and Asian Journal of Energy* 7, 1–20.
23. Nelson, Randy and Michael R. Caputo (1997), "Price Changes, Maintenance, and the Rate of Depreciation," *Review of Economics and Statistics* 79, 422–430.
22. Caputo, Michael R. (1997), "The Qualitative Structure of a Class of Infinite Horizon Optimal Control Problems," *Optimal Control Applications and Methods* 18, 195–215.
21. Underwood, Nora A. and Michael R. Caputo (1996), "Environmental and Agricultural Policy Effects on Information Acquisition and Input Choice," *Journal of Environmental Economics and Management* 31, 198–218.
20. Caputo, Michael R. (1996), "The Envelope Theorem and Comparative Statics of Nash Equilibria," *Games and Economic Behavior* 13, 201–224.
19. Caputo, Michael R. and Brian J. Ostrom (1996), "Optimal Government Policy Regarding a Previously Illegal Commodity," *Southern Economic Journal* 62, 690–709.
18. Paris, Quirino and Michael R. Caputo (1995), "The Rhetoric of Duality," *Journal of Agricultural and Resource Economics* 20, 195–214.
17. Caputo, Michael R. and James E. Wilen (1995), "Optimal Cleanup of Hazardous Wastes," *International Economic Review* 36, 217–243.
16. Caputo, Michael R. and James E. Wilen (1995), "Optimality Conditions and Comparative Statics for Horizon and Endpoint Choices in Optimal Control Theory," *Journal of Economic Dynamics and Control* 19, 351–369.
15. Caputo, Michael R. (1994), "The Slutsky Matrix and Homogeneity in Intertemporal Consumer Theory," *Journal of Economics* 60, 255–279.
14. Caputo, Michael R. and Brian J. Ostrom (1994), "Potential Tax Revenue from a Regulated Marijuana Market," *American Journal of Economics and Sociology* 53, 475–490.
13. Caputo, Michael R. and Dean Lueck (1994), "Modeling Common Property Ownership as a Dynamic Contract," *Natural Resource Modeling* 8, 225–245.
12. Caputo, Michael R. and Lori Lynch (1993), "A Nonparametric Efficiency Analysis of California Cotton Ginning Cooperatives," *Journal of Agricultural and Resource Economics* 18, 251–265.
11. Paris, Quirino, Michael R. Caputo, and Garth J. Holloway (1993), "Keeping the Dream of Rigorous Hypothesis Testing Alive," *American Journal of Agricultural Economics* 75, 25–40.

10. Caputo, Michael R. (1992), "A Primal-Dual Approach to Comparative Dynamics with Time-Dependent Parameters in Variational Calculus," *Optimal Control Applications and Methods* 13, 73–86.
9. Caputo, Michael R. (1992), "Comparative Dynamics in the Labor-Managed Model of the Firm," *Journal of Comparative Economics* 16, 272–286.
8. Caputo, Michael R. (1992), "Fundamental Symmetries and Qualitative Properties in the Adjustment Cost Model of the Firm," *Journal of Mathematical Economics* 21, 99–112.
7. Caputo, Michael R. and Lori Lynch (1991), "Implications of Endogenous Prices in Consumer Theory: The Case of Barter and the Consumer Cooperative," *Journal of Comparative Economics* 15, 421–436.
6. Caputo, Michael R. (1990), "Comparative Dynamics via Envelope Methods in Variational Calculus," *Review of Economic Studies* 57, 689–697.
5. Caputo, Michael R. (1990), "New Qualitative Properties in the Competitive Nonrenewable Resource Extracting Model of the Firm," *International Economic Review* 31, 829–839.
4. Caputo, Michael R. (1990), "How to do Comparative Dynamics on the Back of an Envelope in Optimal Control Theory," *Journal of Economic Dynamics and Control* 14, 655–683.
3. Caputo, Michael R. (1990), "A Qualitative Characterization of the Competitive Nonrenewable Resource Extracting Firm," *Journal of Environmental Economics and Management* 18, 206–226.
2. Caputo, Michael R. (1989), "The Qualitative Content of Renewable Resource Models," *Natural Resource Modeling* 3, 241–259.
1. Caputo, Michael R. and James G. Mulligan (1985), "The Cost Reduction Potential of Electric-Power Pools," *Economics Letters* 18, 387–390.

Papers Under Review:

- Caputo, Michael R., and Dmitriy Popov, "Comparative Statics of a Monopolistic Firm Facing Rate-of-Return and Command-and-Control Pollution Constraints," revised and resubmitted to *Bulletin of Economic Research*
- Caputo, Michael R., "The Intrinsic Comparative Dynamics of Optimal Control Problems are Invariant to the Functional Form of the Discount Function and the Sophistication of the Optimizing Agent," revised and resubmitted to *Journal of Economic Dynamics and Control*
- Caputo, Michael R. and Quirino Paris, "An Intertemporal Theory of Disembodied and Price-Induced Technical Progress," submitted to *Journal of Economics*
- Caputo, Michael R. and Chen Ling, "The Intrinsic Comparative Dynamics of Locally Differentiable Feedback Nash Equilibria of Autonomous and Exponentially Discounted Infinite Horizon Differential Games," submitted to *Journal of Economic Theory*.

Papers in Progress:

- Caputo, Michael R., "The Intrinsic Refutable Implications of Rational Addiction Theory are not Observable, while the Comparative Dynamics that are, are not Refutable," to be submitted to *American Economic Review*
- Caputo, Michael R., "The Fundamental Comparative Statics of a Monopolistic Firm Facing Price-Cap and Command-and-Control Environmental Regulations," to be submitted to *Journal of Industrial Economics*

Papers in their Infancy:

Caputo, Michael R. and Chen Ling, “The Intrinsic Comparative Dynamics of Locally Differentiable Feedback Stackelberg Equilibria of Autonomous and Exponentially Discounted Infinite Horizon Differential Games.”