

# Leigh Tesfatsion

## List of Publications by Year in descending order

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129  
papers

4,529  
citations

185998

28  
h-index

128067

60  
g-index

135  
all docs

135  
docs citations

135  
times ranked

2433  
citing authors

#	ARTICLE	IF	CITATIONS
1	A Consensus-Based Transactive Energy Design for Unbalanced Distribution Networks. IEEE Transactions on Power Systems, 2023, 38, 114-128.	4.6	4
2	An ERCOT test system for market design studies. Applied Energy, 2020, 275, 115182.	5.1	9
3	Methodological Issues of Spatial Agent-Based Models. Jasss, 2020, 23, .	1.0	23
4	A Customer-Centric Approach to Bid-Based Transactive Energy System Design. IEEE Transactions on Smart Grid, 2020, 11, 4996-5008.	6.2	7
5	Code Reusability and Transparency of Agent-Based Modeling: A Review from a Cyberinfrastructure Perspective. Geotechnologies and the Environment, 2020, , 115-134.	0.3	1
6	Swing Contracts With Dynamic Reserves for Flexible Service Management. IEEE Transactions on Power Systems, 2019, 34, 4024-4037.	4.6	2
7	An integrated transmission and distribution test system for evaluation of transactive energy designs. Applied Energy, 2019, 240, 666-679.	5.1	28
8	Braided Cobwebs: Cautionary Tales for Dynamic Pricing in Retail Electric Power Markets. IEEE Transactions on Power Systems, 2018, 33, 6870-6882.	4.6	13
9	A Swing-Contract Market Design for Flexible Service Provision in Electric Power Systems. The IMA Volumes in Mathematics and Its Applications, 2018, , 105-127.	0.5	7
10	Electric Power Markets in Transition: Agent-Based Modeling Tools for Transactive Energy Support. Handbook of Computational Economics, 2018, , 715-766.	1.6	18
11	An agent-based platform for the study of watersheds as coupled natural and human systems. Environmental Modelling and Software, 2017, 89, 40-60.	1.9	30
12	Modeling economic systems as locally-constructive sequential games. Journal of Economic Methodology, 2017, 24, 384-409.	0.6	34
13	Elements of Dynamic Economic Modeling: Presentation and Analysis. Eastern Economic Journal, 2017, 43, 192-216.	0.5	8
14	Market provision of flexible energy/reserve contracts: Optimization formulation. , 2016, , .		6
15	An 8-Zone Test System Based on ISO New England Data: Development and Application. IEEE Transactions on Power Systems, 2016, 31, 234-246.	4.6	63
16	Standardized contracts with swing for the market-supported procurement of energy and reserve. , 2015, , .		1
17	Systematic testing and comparison of deterministic and stochastic unit commitment on an 8-zone test case based on ISO New England data. , 2015, , .		2
18	Macroeconomies as constructively rational games. Journal of Economic Dynamics and Control, 2015, 61, 152-182.	0.9	39

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19	Facilitating appropriate compensation of electric energy and reserve through standardized contracts with swing. Journal of Energy Markets, 2015, 8, 93-121.	0.2	10
20	A Nash Approach to Planning Merchant Transmission for Renewable Resource Integration. IEEE Transactions on Power Systems, 2013, 28, 2086-2100.	4.6	14
21	Time-series properties of the power grid with real-time pricing load customers. , 2012, , .		0
22	Co-learning patterns as emergent market phenomena: An electricity market illustration. Journal of Economic Behavior and Organization, 2012, 82, 395-419.	1.0	8
23	Financial Bilateral Contract Negotiation in Wholesale Electricity Markets Using Nash Bargaining Theory. IEEE Transactions on Power Systems, 2012, 27, 251-267.	4.6	48
24	Intelligent Residential Air-Conditioning System With Smart-Grid Functionality. IEEE Transactions on Smart Grid, 2012, 3, 2240-2251.	6.2	51
25	Effects of price-responsive residential demand on retail and wholesale power market operations. , 2012, , .		9
26	Two-settlement electric power markets with dynamic-price customers. , 2011, , .		0
27	Short-Term Congestion Forecasting in Wholesale Power Markets. IEEE Transactions on Power Systems, 2011, 26, 2185-2196.	4.6	54
28	ISO Net Surplus Collection and Allocation in Wholesale Power Markets Under LMP. IEEE Transactions on Power Systems, 2011, 26, 627-641.	4.6	31
29	Agent-based Modeling and Institutional Design. Eastern Economic Journal, 2011, 37, 13-19.	0.5	7
30	Agent-based simulation of distribution systems with high penetration of photovoltaic generation. , 2011, , .		7
31	Testing Institutional Arrangements via Agent-Based Modeling: A U.S. Electricity Market Application. Dynamic Modeling and Econometrics in Economics and Finance, 2011, , 135-158.	0.4	9
32	Agent-based Modeling: The Right Mathematics for the Social Sciences?. , 2011, , .		46
33	Integrated retail and wholesale power system operation with smart-grid functionality. , 2010, , .		18
34	Global sensitivity analysis for the short-term prediction of system variables. , 2010, , .		7
35	Financial risk management in restructured wholesale power markets: Concepts and tools. , 2010, , .		8
36	Scenario generation for price forecasting in restructured wholesale power markets. , 2009, , .		5

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37	Locational marginal pricing basics for restructured wholesale power markets. , 2009, , .		34
38	Auction basics for wholesale power markets: Objectives and pricing rules. , 2009, , .		14
39	The AMES wholesale power market test bed: A computational laboratory for research, teaching, and training. , 2009, , .		17
40	Capacity withholding in restructured wholesale power markets: An agent-based test bed study. , 2009, , .		13
41	Development of open source software for power market research: the AMES test bed. Journal of Energy Markets, 2009, 2, 111-128.	0.2	92
42	Derivation of locational marginal prices for restructured wholesale power markets. Journal of Energy Markets, 2009, 2, 3-27.	0.2	39
43	An Agent-Based Test Bed Study of Wholesale Power Market Performance Measures. IEEE Computational Intelligence Magazine, 2008, 3, 56-72.	3.4	59
44	Dynamic LMP response under alternative price-cap and price-sensitive demand scenarios. , 2008, , .		12
45	Modeling Macroeconomies as Open-Ended Dynamic Systems of Interacting Agents. American Economic Review, 2008, 98, 246-250.	4.0	239
46	An Agent-Based Computational Laboratory for Wholesale Power Market Design. IEEE Power Engineering Society General Meeting, 2007, , .	0.0	14
47	Open-Source Software for Power Industry Research, Teaching, and Training: A DC-OPF Illustration. IEEE Power Engineering Society General Meeting, 2007, , .	0.0	7
48	Agents come to bits: Towards a constructive comprehensive taxonomy of economic entities. Journal of Economic Behavior and Organization, 2007, 63, 333-346.	1.0	25
49	Modeling of Suppliers' Learning Behaviors in an Electricity Market Environment. , 2007, , .		22
50	Dynamic Testing of Wholesale Power Market Designs: An Open-Source Agent-Based Framework. Computational Economics, 2007, 30, 291-327.	1.5	180
51	Agent-based computational economics. Scholarpedia Journal, 2007, 2, 1970.	0.3	123
52	Chapter 16 Agent-Based Computational Economics: A Constructive Approach to Economic Theory. Handbook of Computational Economics, 2006, 2, 831-880.	1.6	360
53	Appendix A A Guide for Newcomers to Agent-Based Modeling in the Social Sciences. Handbook of Computational Economics, 2006, 2, 1647-1659.	1.6	88
54	Agent-Based Computational Modeling and Macroeconomics. , 2006, , 175-202.		25

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55	EVOLUTION OF WORKER-EMPLOYER NETWORKS AND BEHAVIORS UNDER ALTERNATIVE NON-EMPLOYMENT BENEFITS: AN AGENT-BASED COMPUTATIONAL STUDY. , 2004, , .		8
56	Agent-based computational economics: modeling economies as complex adaptive systems. Information Sciences, 2003, 149, 262-268.	4.0	210
57	Agent-Based Computational Economics: Growing Economies From the Bottom Up. Artificial Life, 2002, 8, 55-82.	1.0	547
58	Economic agents and markets as emergent phenomena. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 7191-7192.	3.3	50
59	Agent-Based Computational Economics: Growing Economies from the Bottom Up. SSRN Electronic Journal, 2002, , .	0.4	36
60	Hysteresis in an Evolutionary Labor Market with Adaptive Search. Studies in Fuzziness and Soft Computing, 2002, , 189-210.	0.6	8
61	Guest editorial agent-based modeling of evolutionary economic systems. IEEE Transactions on Evolutionary Computation, 2001, 5, 437-441.	7.5	45
62	Market power and efficiency in a computational electricity market with discriminatory double-auction pricing. IEEE Transactions on Evolutionary Computation, 2001, 5, 504-523.	7.5	300
63	A computational laboratory for evolutionary trade networks. IEEE Transactions on Evolutionary Computation, 2001, 5, 546-560.	7.5	25
64	Introduction to the special issue on agent-based computational economics. Journal of Economic Dynamics and Control, 2001, 25, 281-293.	0.9	194
65	Structure, behavior, and market power in an evolutionary labor market with adaptive search. Journal of Economic Dynamics and Control, 2001, 25, 419-457.	0.9	82
66	Complexity at Large. Complexity, 2000, 5, 3-10.	0.9	0
67	A C++ Platform for the Evolution of Trade Networks. Computational Economics, 1999, 14, 109-134.	1.5	27
68	Complexity at large. Complexity, 1999, 4, 3-10.	0.9	0
69	Complexity at large. Complexity, 1998, 3, 3-18.	0.9	0
70	Complexity at large. Complexity, 1998, 3, 3-10.	0.9	1
71	Complexity at large. Complexity, 1998, 3, 3-11.	0.9	0
72	Complexity at large. Complexity, 1998, 4, 3-9.	0.9	0

#	ARTICLE	IF	CITATIONS
73	Active intermediation in a monetary overlapping generations economy. Journal of Economic Dynamics and Control, 1998, 22, 1543-1574.	0.9	3
74	Preferential partner selection in evolutionary labor markets: A study in agent-based computational economics. Lecture Notes in Computer Science, 1998, , 13-24.	1.0	5
75	ACTIVE INTERMEDIATION IN OVERLAPPING GENERATIONS ECONOMIES WITH PRODUCTION AND UNSECURED DEBT. Macroeconomic Dynamics, 1998, 2, 183-212.	0.6	4
76	Title is missing!. Journal of Economic Growth, 1997, 2, 305-329.	1.1	31
77	A Trade Network Game with Endogenous Partner Selection. Advances in Computational Economics, 1997, , 249-269.	0.1	60
78	An agent-based computational model for the evolution of trade networks. Lecture Notes in Computer Science, 1997, , 73-83.	1.0	1
79	A multicriteria approach to model specification and estimation. Computational Statistics and Data Analysis, 1996, 21, 193-214.	0.7	12
80	Preferential partner selection in an evolutionary study of Prisoner's Dilemma. BioSystems, 1996, 37, 99-125.	0.9	122
81	Nonlocal automated comparative static analysis. Computer Science in Economics and Management, 1992, 5, 313-331.	0.5	3
82	Overlapping generations, intermediation, and the First Welfare Theorem. Journal of Economic Behavior and Organization, 1991, 15, 325-345.	1.0	5
83	Solving nonlinear equations by adaptive homotopy continuation. Applied Mathematics and Computation, 1991, 41, 99-115.	1.4	38
84	Work by Robert Kalaba on multicriteria estimation. Applied Mathematics and Computation, 1991, 45, 159-171.	1.4	0
85	A unified approach to dynamic estimation. Information Sciences, 1991, 57-58, 159-169.	4.0	0
86	Work by Robert Kalaba on automated sensitivity analysis. Applied Mathematics and Computation, 1991, 45, 121-133.	1.4	1
87	Flexible least squares for approximately linear systems. IEEE Transactions on Systems, Man, and Cybernetics, 1990, 20, 978-989.	0.9	31
88	An organizing principle for dynamic estimation. Journal of Optimization Theory and Applications, 1990, 64, 445-470.	0.8	8
89	Nonlocal automated sensitivity analysis. Computers and Mathematics With Applications, 1990, 20, 53-65.	1.4	14
90	U.S. money demand instability A flexible least squares approach. Journal of Economic Dynamics and Control, 1990, 14, 151-173.	0.9	32

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91	A further note on flexible least squares and Kalman filtering. <i>Journal of Economic Dynamics and Control</i> , 1990, 14, 183-185.	0.9	0
92	Time-varying linear regression via flexible least squares. <i>Computers and Mathematics With Applications</i> , 1989, 17, 1215-1245.	1.4	109
93	A FORTRAN program for time-varying linear regression via flexible least squares. <i>Computational Statistics and Data Analysis</i> , 1989, 7, 291-309.	0.7	6
94	Sequential nonlinear estimation with nonaugmented priors. <i>Journal of Optimization Theory and Applications</i> , 1989, 60, 421-438.	0.8	9
95	Exact sequential filtering, smoothing and prediction for nonlinear systems. <i>Nonlinear Analysis: Theory, Methods &amp; Applications</i> , 1988, 12, 599-615.	0.6	8
96	The flexible least squares approach to time-varying linear regression. <i>Journal of Economic Dynamics and Control</i> , 1988, 12, 43-48.	0.9	36
97	An invariant-embedding solution of general linear two-point boundary-value problems. <i>Applied Mathematics and Computation</i> , 1988, 26, 237-244.	1.4	6
98	Automation of nested matrix and derivative operations. <i>Applied Mathematics and Computation</i> , 1987, 23, 243-268.	1.4	5
99	Nonlocal sensitivity analysis, automatic derivative evaluation, and sequential nonlinear estimation. <i>Computational Statistics and Data Analysis</i> , 1986, 4, 79-91.	0.7	1
100	Time inconsistency of benevolent government economies. <i>Journal of Public Economics</i> , 1986, 31, 25-52.	2.2	17
101	Fair division with uncertain needs and tastes. <i>Social Choice and Welfare</i> , 1985, 2, 295-309.	0.4	20
102	Utilitarianism and beyond. <i>Journal of Economic Behavior and Organization</i> , 1985, 6, 210-212.	1.0	0
103	Games, goals, and bounded rationality. <i>Theory and Decision</i> , 1984, 17, 149-175.	0.5	2
104	Welfare implications of net social security wealth. <i>Journal of Public Economics</i> , 1984, 24, 1-27.	2.2	4
105	Pure strategy Nash equilibrium points and the Lefschetz fixed point theorem. <i>International Journal of Game Theory</i> , 1983, 12, 181-191.	0.5	5
106	A finite algorithm for the exact evaluation of higher order partial derivatives of functions of many variables. <i>Journal of Mathematical Analysis and Applications</i> , 1983, 92, 552-563.	0.5	22
107	Macro implications of government redistributive tax-transfer policies. <i>Journal of Public Economics</i> , 1982, 19, 139-169.	2.2	2
108	A stability theorem for symmetrically rational counterplanning. <i>Journal of Optimization Theory and Applications</i> , 1982, 37, 379-385.	0.8	0

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109	A dual approach to Bayesian inference and adaptive control. <i>Theory and Decision</i> , 1982, 14, 177-194.	0.5	10
110	Individual tracking of an eigenvalue and eigenvector of a parameterized matrix. <i>Nonlinear Analysis: Theory, Methods &amp; Applications</i> , 1981, 5, 337-340.	0.6	24
111	Variational equations for the eigenvalues and eigenvectors of nonsymmetric matrices. <i>Journal of Optimization Theory and Applications</i> , 1981, 33, 1-8.	0.8	26
112	A sequential method for nonlinear filtering: Numerical implementation and comparisons. <i>Journal of Optimization Theory and Applications</i> , 1981, 34, 541-559.	0.8	6
113	Dynamic investment, risk aversion, and foresight sensitivity. <i>Journal of Economic Dynamics and Control</i> , 1981, 3, 65-96.	0.9	4
114	Local and nonlocal comparative static analysis of economic systems. <i>Applied Mathematics and Computation</i> , 1981, 9, 227-234.	1.4	8
115	Complete comparative static differential equations. <i>Nonlinear Analysis: Theory, Methods &amp; Applications</i> , 1981, 5, 821-833.	0.6	12
116	An exact sequential solution procedure for a class of discrete-time nonlinear estimation problems. <i>IEEE Transactions on Automatic Control</i> , 1981, 26, 1144-1149.	3.6	13
117	C3 modeling with symmetrical rationality. <i>Applied Mathematics and Computation</i> , 1980, 6, 51-61.	1.4	3
118	A new differential equation method for finding the Perron root of a positive matrix. <i>Applied Mathematics and Computation</i> , 1980, 7, 187-193.	1.4	7
119	A conditional expected utility model for myopic decision makers. <i>Theory and Decision</i> , 1980, 12, 185-206.	0.5	8
120	A least-squares model specification test for a class of dynamic nonlinear economic models with systematically varying parameters. <i>Journal of Optimization Theory and Applications</i> , 1980, 32, 537-567.	0.8	18
121	Global and approximate global optimality of myopic economic decisions. <i>Journal of Economic Dynamics and Control</i> , 1980, 2, 135-160.	0.9	12
122	Direct Updating of Intertemporal Criterion Functions for a Class of Adaptive Control Problems. <i>IEEE Transactions on Systems, Man, and Cybernetics</i> , 1979, 9, 143-151.	0.9	15
123	A new approach to filtering and adaptive control. <i>Journal of Optimization Theory and Applications</i> , 1978, 25, 247-261.	0.8	16
124	A new approach to filtering and adaptive control: stability results. <i>Applied Mathematics and Computation</i> , 1978, 4, 27-44.	1.4	4
125	Parameter-sensitivity study for a linear-quadratic control problem with random state coefficients. <i>Information Sciences</i> , 1978, 15, 101-125.	4.0	2
126	A note on dependence between a venture and a current prospect. <i>Journal of Economic Theory</i> , 1977, 15, 381-391.	0.5	9



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127	Probability Theory With the Essential Analysis. Applied Mathematics and Computation, 1977, 3, 281.	1.4	0
128	Stochastic Dominance and the Maximization of Expected Utility. Review of Economic Studies, 1976, 43, 301.	2.9	88
129	How Economists Can Get ALife. , 0 , 533-564.		27