# VITA

## William R. ZAME

## October 2019

Positions	Distinguished Professor, Economics and Mathematics, UCLA			
Permanent Address	Departm 8283 Bu UCLA Los Ang	nent of Econor inche Hall geles, CA 900	nics 95	
CITIZENSHIP	USA			
EDUCATION	1965 1967 1970	B.S. M.S. Ph.D.	Mathematics Mathematics Mathematics	California Institute of Technology Tulane University Tulane University
Interests	Economic Theory (General Equilibrium Theory, Cooperative and Non-cooperative Game Theory), Experimental Economics, Finance, Macroeconomics; Communications Engineering; Artificial Intelligence and Machine Learning			

## **EMPLOYMENT HISTORY**

2000 -	Distinguished Professor Departments of Economics and Mathematics UCLA
1991 -	Professor Department of Economics UCLA
1990 - 1993	Professor Departments of Economics and Mathematics The Johns Hopkins University
1983 - 1991	Professor Department of Mathematics State University of New York at Buffalo
1976 - 1983	Associate Professor Department of Mathematics State University of New York at Buffalo
1975 - 1978	Associate Professor Department of Mathematics Tulane University
1972 - 1976	Assistant Professor Department of Mathematics State University of New York at Buffalo
1970 - 1972	Griffith C. Evans Instructor Department of Mathematics Rice University

## **OTHER POSITIONS**

2018	Visiting Professor Department of Economics University College, London
2016-2017	Academic Visitor Nuffield College Oxford University
	Visiting Professor Department of Economics University College, London
2012 - 2013	Visiting Fellow EIEF
2005 - 2006 2002 - 2003 2000 - 2001	Visiting Professor Division of Humanities and Social Sciences California Institute of Technology

2004 - 2005	Fellow John Simon Guggenheim Memorial Foundation
1996 (Winter)	Ford Visiting Professor Department of Economics UC Berkeley
1993 (Fall)	Visiting Professor Department of Economics Virginia Polytechnic Institute & State University
1989 - 1990	Visiting Professor Department of Economics UCLA
1988 (Spring)	Visiting Professor Institute of Economics University of Copenhagen
1987 (Fall)	Senior Fellow Institut Mittag-Leffler Djursholm, Sweden
1985 (Fall)	Senior Fellow Mathematical Sciences Research Institute Berkeley, CA
1984 (Spring)	Senior Fellow Institute for Mathematics and its Applications Minneapolis, MN
1981 (Spring)	College Visiting Professor Department of Mathematics University of Washington
1980 - 1981	Member School of Mathematics Institute for Advanced Study

#### HONORS AND ACTIVITIES

Fellow of the John Simon Guggenheim Foundation, 2004-2005

Fellow of the Econometric Society (elected 1994) Fellow of the Society for the Advancement of Economic Theory

Co-Editor, *Economic Theory*, 2011 - present Co-Editor, *Foundations and Trends in Economic Theory*, 2008 – 2012 Associate Editor, *Theoretical Economics*, 2000 - present Associate Editor, *Journal of Mathematical Economics*, 1988 - 2012 Associate Editor, *Econometrica*, 1998 - 2006 Associate Editor, *Journal of Economic Theory*, 1990 - 2002

Program Co-Chair, Econometric Society 2002 Summer Meetings

Program Committee, Econometric Society 1991 Summer Meetings Program Committee Econometric Society 1997 Summer Meetings Program Committee Co-Chair Econometric Society 2002 Summer Meetings Program Committee, SAET Conference 2003, 2009, 2011 Program Committee, NBER Conference on General Equilibrium Theory 2006 Organizing Committee, Network Economics and Game Theory, 2009-2014

Organizer, Conference: "Economics of Financial Markets" The Johns Hopkins University, 1992 Organizer, Conference & Short Course: "Economics of Financial Markets" SUNY at Stony Brook, 1995 Organizer, CalTech/UCLA Conference: "Experimental Economics," 1999 Organizer, Southwest Economic Theory Conference, 2003 Co Organizer, Network Economics and Game Theory, 2010, 2013

Committee on the Status of Women in the Economics Profession, 1997 - 1999

Reviewer for: National Science Foundation US (Economics, Mathematics, Applied Mathematics) National Academy of Sciences National Research Council of Canada (Economics, Mathematics) National Science Foundation Israel (Economics) Many Economics and Mathematics journals

#### **RESEARCH GRANTS**

1970 – 1972	Associate Investigator, NSF Mathematics Program
1973 - 1976	Principal Investigator, NSF Mathematics Program
1976 - 1977	Principal Investigator, NSF Mathematics Program
1977 – 1979	Principal Investigator, NSF Mathematics Program
1979 - 1980	Principal Investigator, NSF Mathematics Program
1980 - 1982	Principal Investigator, NSF Mathematics Program
1982 - 1986	Principal Investigator, NSF Mathematics Program
1986 - 1988	Principal Investigator, NSF Mathematics Program
1988 - 1990	Principal Investigator, NSF Economics Program
1990 - 1993	Principal Investigator, NSF Economics Program
1993 - 1997	Principal Investigator, NSF Economics Program
1997 - 2000	Principal Investigator, NSF Economics Program
2000 - 2003	Principal Investigator, NSF Economics Program
	"Rational Markets, Irrational Traders: Theory and Experiment"
2003 - 2006	Principal Investigator, NSF Economics Program
	"The Evolution of Prices and Allocations in Financial Markets"
2005 - 2011	Principal Investigator, NSF Economics Program
	"Contracts and Markets: Toward a General Equilibrium Theory of Firms"
2006 - 2013	Principal Investigator, NSF Economics Program
	"Experiments on Information and Information Processing
	in Financial Markets"
2008 - 2009	Population Research Center
	"The Determinants of College Success"
2010 - 2011	Ziman Center for Real Estate
	"Markets and Location"

#### **Ph.D. STUDENTS**

Frank Beatrous (Tulane University: Mathematics) Jack Reichmann (SUNY at Buffalo: Mathematics) Chongshan Liu (The Johns Hopkins University: Economics) Shwu-Jane Shieh (The Johns Hopkins University: Economics) Patrick Asea (The Johns Hopkins University: Economics) Graciela Rodriguez-Marine (UCLA: Economics) Michael Kimel (UCLA: Economics) Jose Penalva-Zuasti (UCLA: Economics) Sara Castellanos (UCLA: Economics) Konstantina Kiousis (UCLA: Anderson Graduate School of Management) Richard Barrett (UCLA: Economics) Yuan Gao (UCLA: Economics) Josh Shackman (UCLA: Economics) Debrah Meloso (Caltech: Social Sciences) Viola Chen (UCLA: Economics) Marco Huesch (UCLA: Anderson Graduate School of Management) Zacharias Maniadis (UCLA: Economics) Nina Walton (UCLA: Economics) James Spindler (UCLA: Economics) Corey Garriott (UCLA: Economics) Santiago Sautua (UCLA: Economics) Anastasia Burkovskaya (UCLA: Economics) Tiago Caruso (UCLA; Economics)

## **RECENT INVITED LECTURES & PRESENTATIONS**

1996	5 - 1997	Conference on Financial Innovation (SITE) Conference on General Equilibrium Theory (SITE) University of Illinois Washington University in St. Louis (2) Midwest Mathematical Economics Meeting University of Southern California UC Davis NBER Conference, General Equilibrium Theory (2) (1 paper presented by co-author R. Anderson) UC Berkeley Conference on General Equilibrium Theory, Venice (3)
1997	' - 1998	Conference on General Equilibrium Theory Stanford Institute for Theoretical Economics Stanford University NBER Conference on Decentralization Theory (presented by co-author) National Research Council, "Exploring the Interface Between the Sciences" and Mathematical Sciences" University of Rochester Business School Princeton University N.Y.U. NBER Conference on General Equilibrium Theory (presented by co-author) Royal Netherlands Academy Conference "Markets and their Functioning" University of Copenhagen (2) Odense University
1998	8 - 1999	MSRI Conference, "Mathematics and the Media" Arizona State University Yale University UC San Diego
1999	9 - 2000	Stanford University (Finance) UC Berkeley (Finance) Mathematical Association of America (Invited Address) UC San Diego University of Iowa Pennsylvania State University University of Pittsburgh UC Riverside University of Pennsylvania (Wharton School) Cornell University NBER Conference on General Equilibrium Theory (2) Northwestern University University of Chicago (2)
2000	0 - 2001	UC Berkeley Southwestern Economic Theory Conference NBER Asset Pricing Working Group
2001	- 2002	European Summer Symposium on Financial Markets Southwestern Economic Theory Conference California Institute of Technology Bachelier International Finance Congress (plenary speaker)

2002 – 2003	Harvard University Harvard University - MIT (joint) University of Copenhagen University of Texas (finance) University of Texas (economics) Econometric Society Summer Meetings Stanford Institute for Theoretical Economics
2003 - 2004	Bank of Italy University of Southern California California Institute of Technology
2004 - 2005	University of California, Berkeley Universitat Pompeu Fabra: Short course on Experimental Finance Universitat Pompeu Fabra Barcelona JOCS University of California, San Diego California Institute of Technology
2005 – 2006	University of Toulouse University College, London Oxford University Debreu Memorial Conference Debreu Memorial Conference (plenary lecture) Social and Information Science Laboratory Conference (plenary lecture) UC Irvine University of Southern California Cornell University NYU Princeton University Northwestern University University of Chicago IMBS Conference on Mathematical Economics UC Santa Barbara
2006 – 2007	University of Arizona University of Southern California UC Davis University of Salerno University of Brescia Bocconi University (Milan) Collegio Carlo Alberto (Turin) Swiss Finance Institute (Lausanne) Yale University
2007 – 2008	UC Berkeley (2) Duke University UT Austin Rice University International Conference on Experimental Social Sciences (Osaka, Japan) University of Southern California
2008 - 2009	EPFL EE: Short course, "Game Theory and Networks"

2009 - 2010	Washington University in St. Louis University of Illinois Credit, Default and Bankruptcy Conference (LAEF, UC Santa Barbara)
2010 - 2011	EPFL, Lausanne: Short course, "Game Theory and Finance" University of Zurich UC San Diego Shanghai Jiao Tong University, EE
2011-2012	Queen Mary University, London Vienna Graduate School of Finance Network Economics and Game Theory Conference University of Paris EE Tutorial "Strategic Design" Harvard University, EE
2012-2013	EIEF, Rome (3 lectures) EIEF, Rome lecture series, "Asset Pricing: Theory and Experiment" EPFL, Lausanne Collegio Carlo Alberto, Turin University of Bologna Lionel McKenzie Lecture, SAET Annual Meeting (Paris) EPFL, Lausanne EE University of Padova EE University of Rome, La Sapienza, EE Tutorial "Strategic Design" ICASSP (Vancouver) EE Tutorial "Strategic Design"
2013-2014	UC San Diego UC Berkeley Network Economics and Game Theory Conference Southwest Economic Theory Conference (Plenary Address)
2014-2015	Network Economics and Game Theory Conference Imperial College, London Washington University in St. Louis (2 lectures) EIEF, Rome IHS, Vienna lecture series, "Asset Pricing: Theory and Experiment" Vienna Graduate School of Finance Summer Workshop on Economic Theory, Paris IPAM, Tutorial
2015-2016	Experimental Finance Conference, Sundance (Utah) UC San Diego
2016-2017	University of Oxford University of Surrey Royal Holloway University Nuffield College (University of Oxford) Farr Institute for Medical Informatics University of Glasgow London School of Economics European Workshop on General Equilibrium Theory (Gerard Debreu Lecture) Universidad Carlos III

2017-2018	EIEF, Rome (3 lectures) Neural Information Processing Systems Conference Association for the Advancement of Artificial Intelligence Conference (Spotlight talk)
2018-2019	Novartis NYU Conference on Experimental Finance (keynote address)
2019-2020	University of Maryland (Finance) University of Virginia Brandeis University Harvard/MIT NBER General Equilibrium Conference (Berkeley) – Invited Address

#### **PUBLICATIONS**

- 1. William R. Zame, "A Characterization of Hereditarily Indecomposable Continua," *Proceedings of the American Mathematical Society* **17** (1966), 709-710.
- Frank T. Birtel and William R. Zame, "Some Analytic Function Algebras," Symposium on Several Complex Variables, Park City, Utah, 1970, Springer-Verlag Lecture Notes in Mathematics 184 (1970), 1-10.
- 3. William R. Zame, "Homomorphisms of Rings of Germs of Analytic Functions," *Proceedings of the American Mathematical Society* **33** (1972), 410-415.
- 4. William R. Zame, "Algebras of Analytic Functions in the Plane," *Pacific Journal of Mathematics* **42** (1972), 811-819.
- 5. William R. Zame, "Algebras of Analytic Germs," *Transactions of the American Mathematical Society* **174** (1972) 275-288.
- 6. John W. Bunce and William R. Zame, "Boundaries for Subspaces of C(X)," *Proceedings of the NATO Conference on Compact Convex Sets, Swansea, Wales* (1972).
- 7. William R. Zame, "Induced Homomorphisms of Algebras of Analytic Germs," *Proceedings of the Conference on Complex Analysis*, Rice University Studies **59**, No. **2** (1973), 157-163.
- 8. William R. Zame, "Relative Size of the Shilov Boundary of a Function Algebra," *Proceedings of the American Mathematical Society* **44** (1974), 68-70.
- 9. John W. Bunce and William R. Zame, "Boundaries for Subspaces of C(X)," *Quarterly Journal of Mathematics* **25** (1974), 227-234.
- 10. William R. Zame, "Analytic Structure in Some Analytic Function Algebras," *Transactions of the American Mathematical Society* **203** (1975), 215-226.
- 11. William R. Zame, "Strong Uniqueness of the Functional Calculus for Some Commutative Banach Algebras," *Journal of the London Mathematical Society* **13** (1976), 13-18.
- William R. Zame, "Holomorphic Convexity of Compact Sets in Analytic Spaces and the Structure of Algebras of Holomorphic Germs," *Transactions of the American Mathematical Society* 212 (1976), 107-127.
- 13. William R. Zame, "Extendibility, Boundedness and Sequential Convergence in Spaces of Holomorphic Functions," *Pacific Journal of Mathematics* **57** (1976), 619-628.
- 14. Catherine L. Olsen and William R. Zame, "Some C\*-algebras with a Single Generator," *Transactions of the American Mathematical Society* **215** (1976), 205-217.
- 15. William R. Zame, "Existence and Uniqueness of Functional Calculus Homomorphisms," *Bulletin of the American Mathematical Society* 82 (1976), 123-125.
- 16. Joseph A. Becker and William R. Zame, "Homomorphisms into Analytic Rings," *Proceedings of Symposia in Pure Mathematics* XXX, part 2 (1977), 7-10.
- 17. William R. Zame, "Uniform Algebras on Plane Domains," *Proceedings of Symposia in Pure Mathematics* XXX, part 2 (1977), 193-198.

- 18. William R. Zame, "Existence, Uniqueness and Continuity of Functional Calculus Homomorphisms," *Proceedings of the London Mathematical Society* **39** (1979), 73-92.
- 19. Joseph A. Becker and William R. Zame, "Homomorphisms into Analytic Rings," *American Journal of Mathematics* **101** (1979), 1103-1122.
- Joseph A. Becker and William R. Zame, "Applications of Functional Analysis to the Solution of Power Series Equations," *Mathematische Annalen* 243 (1979), 37-54.
- William R. Zame, "Classification of Uniform Algebras on Plane Domains," *Pacific Journal of Mathematics* 99 (1982), 231-247.
- 22. Stephen H. Schanuel and William R. Zame, "Naturality of the Functional Calculus," *Bulletin of the London Mathematical Society* 14 (1982), 218-220.
- 23. James T. Rogers, Jr. and William R. Zame, "Extension of Analytic Functions and the Topology in Spaces of Analytic Functions," *Indiana University Mathematics Journal* **31** (1982), 809-818.
- John-Erik Fornaess and William R. Zame, "Riemann Domains and Envelopes of Holomorphy," Duke Mathematical Journal 50 (1983), 273-283.
- 25. William R. Zame, "Covering Spaces and the Galois Theory of Commutative Banach Algebras," *Journal of Functional Analysis* **55** (1984), 151-175.
- William R. Zame, "The Maximal Ideal Space of a Commutative Banach Algebra," *Proceedings of the Conference on Banach Algebras and Several Complex Variables*, A.M.S. Contemporary Mathematics Series (1984).
- 27. Myrna H. Wooders and William R. Zame, "Approximate Cores of Large Games," *Econometrica* **52** (1984), 1327-1350. (lead article)
- Theodore Gamelin, Donald Marshall, Rahman Younnis and William R. Zame, "Function Theory and M-ideals," *Arkiv for Matematik* 23 (1985), 261-279.
- 29. Edgar Lee Stout and William R. Zame, "Totally Real Imbeddings and the Universal Covering Spaces of Domains of Holomorphy: Some Examples," *Manuscripta Mathematica* **50** (1985), 29-48.
- 30. Edgar Lee Stout and William R. Zame, "A Stein Manifold Topologically but not Holomorphically Equivalent to a Domain in C<sup>N</sup>," *Advances in Mathematics* **60** (1986), 154-160.
- 31. Nicholas Yannelis and William R. Zame, "Equilibria in Banach Lattices without Ordered Preferences," *Journal of Mathematical Economics* **15** (1986), 85-110.
- Scott Richard and William R. Zame, "Proper Preferences and Quasi-concave Utility Functions," Journal of Mathematical Economics 15 (1986), 231-247.
- William R. Zame, "Competitive Equilibria in Production Economies with an Infinite Dimensional Commodity Space," *Econometrica* 55 (1987), 1075-1108.
- Myrna H. Wooders and William R. Zame, "Large Games: Fair and Stable Outcomes," *Journal of Economic Theory* 42 (1987), 59-93.
- 35. Rita Saerens and William R. Zame, "The Isometry Groups of Manifolds and the Automorphism Groups of Domains," *Transactions of the American Mathematical Society* **301** (1987), 413-429.

- 36. John-Erik Fornaess and William R. Zame, "A Runge Domain without a Runge Exhaustion," *Mathematische Zeitschrift* **194** (1987), 1-5.
- 37. Myrna H. Wooders and William R. Zame, "Values of Large Finite Games," in Alvin E. Roth, ed., *The Shapley Value; Essays in Honor of Lloyd Shapley*, North Holland (1988).
- 38. Elaine Bennett and William R. Zame, "Bargaining in Cooperative Games," *International Journal of Game Theory* **17** (1988), 279-300.
- 39. Timothy Kehoe, David Levine, Andreu Mas-Colell and William R. Zame, "Determinacy of Equilibrium in Large-square Economies," *Journal of Mathematical Economics* **18** (1989), 231-263.
- 40. Darrell Duffie and William R. Zame, "The Consumption-based Capital Asset Pricing Model," *Econometrica* **57** (1989), 1279-1298.
- Rita Saerens and William R. Zame, "The Local Automorphism Group of a CR Hypersurface," in J. E. Fornaess, ed., *Proceedings of the Mittag-Leffler Institute 1987 - 1988*, Princeton University Press, Princeton (1990).
- 42. Leo K. Simon and William R. Zame, "Discontinuous Games and Endogenous Sharing Rules," *Econometrica* **58** (1990), 861-872.
- 43. Andreu Mas-Colell and William R. Zame, "Equilibrium Theory in Infinite Dimensional Spaces," in W. Hildenbrand and H. Sonnenschein, editors, *Handbook of Mathematical Economics, volume IV*, North Holland, Amsterdam (1991).
- 44. Stephen Schanuel, Leo K. Simon and William R. Zame, "The Algebraic Geometry of Games and the Tracing Procedure," in R. Selten, ed., *Game Equilibrium Models, II: Methods, Morals and Markets*, Springer-Verlag, Berlin (1991), 9-44.
- 45. Neil Gretsky, Joseph Ostroy and William R. Zame, "The Non-atomic Assignment Model," *Economic Theory* **2** (1992), 103-127.
- William R. Zame, "Asymptotic Behavior of Asset Markets: Asymptotic Inefficiency," in R. Becker et al, ed., *General Equilibrium, Growth and Trade: The Legacy of Lionel McKenzie*, Academic Press, New York (1993).
- 47. Lawrence E. Blume and William R. Zame, "The Algebraic Geometry of Competitive Equilibrium," in W. Neuefeind, ed., *Essays in General Equilibrium and International Trade: In Memoriam Trout Rader*, Springer-Verlag, New York (1993).
- 48. William R. Zame, "Efficiency and the Role of Default when Security Markets are Incomplete," *American Economic Review* **83** (1993), 1142-1164.
- Joseph Ostroy and William R. Zame, "Non-atomic Economies and the Boundaries of Perfect Competition," *Econometrica* 62 (1994), 593-633.
- 50. Lawrence E. Blume and William R. Zame, "The Algebraic Geometry of Perfect and Sequential Equilibrium," *Econometrica* 62 (1994), 783-794.
- Yuri Abramovich, Charambalos D. Aliprantis and William R. Zame, "A Representation Theorem for Riesz Spaces and its Applications in Economics," *Economic Theory* 5 (1995), 527-535.
- 52. Andreu Mas-Colell and William R. Zame, "The Existence of Security Market Equilibrium with a Nonatomic State Space," *Journal of Mathematical Economics* **26** (1996), 63-84.

- 53. David K. Levine and William R. Zame, "Debt Constraints and Equilibrium in Infinite Horizon Economies with Incomplete Markets," *Journal of Mathematical Economics* **26** (1996), 103-131.
- 54. John Nachbar and William R. Zame, "Non-Computable Strategies and Discounted Repeated Games," *Economic Theory* **8** (1996), 103-122.
- 55. Robert M. Anderson and William R. Zame, "Core Convergence with Infinitely Many Commodities, *Mita Gakkai Zasshi* **89** (1996), 17-28 (in Japanese).
- 56. Neil Gretsky, Joseph Ostroy and William R. Zame, "An Application of Measure Theory to Perfect Competition," in J. A. Goldstein, N. Gretsky and J. J. Uhl, Jr., eds., *Stochastic Processes and Functional Analysis: in Celebration of M.M. Rao's 65<sup>th</sup> Birthday*, Marcel Dekker, New York (1997).
- 57. Robert M. Anderson and William R. Zame, "Edgeworth's Conjecture with Infinitely Many Commodities: L<sup>1</sup>," *Econometrica* **65** (1997), 225-274.
- Robert M. Anderson and William R. Zame, "Edgeworth's Conjecture with Infinitely Many Commodities: Differentiated Commodities," *Economic Theory* 11 (1998), 331-377.
- 59. Elaine Bennett, Michael Maschler and William R. Zame. "A Demand Adjustment Process," *International Journal of Game Theory* **26** (1998), 423-438.
- 60. Neil Gretsky, Joseph Ostroy and William R. Zame, "Perfect Competition in the Continuous Assignment Model," *Journal of Economic Theory* **88** (1999), 60-118.
- 61. Bryan Ellickson, Birgit Grodal, Suzanne Scotchmer and William R. Zame, "Clubs and the Market," *Econometrica* 67 (1999), 1185-1218.
- David K. Levine and William R. Zame, "Risk Sharing and Market Incompleteness," in *The Theory* of Markets, P.J.J. Herings, G. van der Laan, and A.J.J. Talman (eds.), Amsterdam: North-Holland (1999), 217-227.
- 63. Sheryl Ball, Catherine Eckel, Philip Grossman and William R. Zame, "Status in Markets," *Quarterly Journal of Economics* 116 (2001), 161-188.
- 64. Bryan Ellickson, Birgit Grodal, Suzanne Scotchmer and William R. Zame, "Clubs and the Market: Large Finite Economies" *Journal of Economic Theory* **101** (2001), 40-77.
- 65. Robert M. Anderson and William R. Zame, "Genericity with Infinitely Many Parameters," *Advances in Theoretical Economics* **1** (2001), 1-62.
- 66. Chris Shannon and William R. Zame, "Quadratic Concavity and Determinacy of Equilibrium," *Econometrica* **70** (2002), 631-662.
- Matt Jackson, Leo K. Simon, Jeroen Swinkels and William R. Zame, "Communication and Equilibrium in Discontinuous Games of Incomplete Information," *Econometrica* 70 (2002), 1711-1740. (lead article)
- David K. Levine and William R. Zame, "Does Market Incompleteness Matter?" *Econometrica* 70 (2002), 1805-1839.
- 69. Neil Gretsky, Joseph Ostroy and William R. Zame, "Subdifferentiability and the Duality Gap," *Positivity* **6** (2002), 261-274.
- David Levine and William R. Zame, editors, Proceedings of the Econometric Society Summer Meetings (2002). <u>http://www.dklevine.com/proceedings</u>.

- Chris Harris, Max Stinchcombe and William R. Zame, "Nearly Compact and Continuous Normal Form Games: Characterizations and Equilibrium Existence," *Games and Economic Behavior* 50 (2005), 208-224.
- Bryan Ellickson and William R. Zame, "A Competitive Model of Economic Geography," *Economic Theory* 25 (2005), 89-103. Expanded version in K. Vind, ed., *The Birgit Grodal Symposium*. Berlin: Springer-Verlag (2006).
- Bryan Ellickson, Birgit Grodal, Suzanne Scotchmer and William R. Zame, "The Organization of Production, Consumption and Learning," in K. Vind, ed., *The Birgit Grodal Symposium*. Berlin: Springer-Verlag (2006).
- 74. Mitsunori Noguchi and William R. Zame, "Competitive Markets with Externalities," *Theoretical Economics* 1 (2006), 143-166.
- 75. Philippe Jehiel, Moritz Meyer-ter-Vehn, Benny Moldovanu and William R. Zame, "The Limits of Ex-Post Implementation," *Econometrica* 74 (2006), 585-610. (lead article)
- Peter Bossaerts and William R. Zame, "Asset Trading Volume in Infinite-Horizon Economies with Dynamically Complete Markets and Heterogeneous Agents: Comment," *Finance Research Letters* 3 (2006), 96-101.
- 77. Peter Bossaerts, Charles Plott and William R. Zame, "Prices and Portfolio Choices in Financial Markets: Theory, Econometrics, Experiments," *Econometrica* 75 (2007), 993-1038.
- 78. William R. Zame, "Can Intergenerational Equity be Operationalized?" *Theoretical Economics* 2 (2007), 187-202.
- 79. William R. Zame, "Incentives, Contracts and Markets: A General Equilibrium Theory of Firms," *Econometrica* 75 (2007), 1453-1500.
- Philippe Jehiel, Moritz Meyer-ter-Vehn, Benny Moldovanu and William R. Zame, "Posterior Implementation vs Ex Post Implementation," *Economics Letters* 96 (2007), 70-73.
- 81. William R. Zame, "General Equilibrium Theory: Recent Developments," in L. Blume and S. Durlauf, eds., *The New Palgrave Dictionary of Economics*. London: MacMillan (2008).
- 82. Peter Bossaerts and William R. Zame, "Risk Aversion in Laboratory Asset Markets," in J. Cox and G. Harrison, eds., *Risk Aversion in Experiments*. Bingley, UK: Emerald (2008).
- 83. Peter Bossaerts, Paolo Ghirardato, Serena Guarneschelli and William R. Zame, "Ambiguity in Asset Markets: Theory and Experiment," *Review of Financial Studies* 23 (2010), 1325-1359.
- 84. Yuanzhang Xiao, William R. Zame and Mihaela van der Schaar, "Technology Choices and Pricing Policies in Wireless Networks," *IEEE ICC Workshop on Game Theory and Resource Allocation for* 4G (2011). Online as "Technology Choices and Pricing Policies in Public and Private Wireless Networks," <u>http://arxiv.org/abs/1011.3580</u>
- Khoa Phan Tran, Mihaela van der Schaar and William R. Zame, "Congestion, Information and Secret Information in Flow Networks," *IEEE Journal on Selected Topics in Signal Processing*, (2012).
- Mihaela van der Schaar, Jie Xu and William R. Zame, "Efficient Online Exchange via Fiat Money," Economic Theory 52, (2013), 211-248.

- William R. Zame, Jie Xu and Mihaela van der Schaar, "Winning the Lottery: Learning Perfect Coordination with Minimal Feedback," *IEEE Journal on Selected Topics in Signal Processing* 7 (2013), 846-857.
- 88. Luca Canzian, Yuanzhang Xiao, William R. Zame, Mihaela van der Schaar and Michele Zorzi, "Intervention with Private Information, Imperfect Monitoring and Costly Communication: Design Framework," *IEEE Transactions on Communications* (2014).
- Luca Canzian, Yuanzhang Xiao, William R. Zame, Mihaela van der Schaar and Michele Zorzi, "Intervention with Complete and Incomplete Information: Application to Flow Control," *IEEE Transactions on Communications* (2014).
- 90. William R. Zame, Jie Xu and Mihaela van der Schaar, "Cooperative Multi-Agent Learning and Coordination for Cognitive Radio Networks," *IEEE Journal on Selected Areas in Communications Cognitive Radio Series* (2014).
- 91. John Geanakoplos and William R. Zame, "Collateral Equilibrium I: A Basic Model," *Economic Theory* 56 (2014), 443-492.
- 92. Elena Asparouhova, Peter Bossaerts, Jon Eguia and William R. Zame, "Asset Markets with Asymmetric Reasoning," *Journal of Political Economy* 123 (2015), 66-122.
- Yuanzhang Xiao, William R. Zame and Mihaela van der Schaar, "Technology Choices and Pricing Policies in Public and Private Wireless Networks," *IEEE/ACM Transactions on Wireless Communications* 13 (2014).
- 94. Mihaela van der Schaar, Yuanzhang Xiao and William R. Zame, "Efficient Outcomes in Repeated Games with Limited Monitoring," *Economic Theory* 60 (2015), 1-34.
- 95. Elena Asparahouva, Peter Bossaerts, Nilanjan Roy and William R. Zame, "'Lucas' in the Laboratory," *Journal of Finance* 71 (2017), 2727-2780.
- Jinsung Yoon, William R. Zame, Amitava Banerjee, Martin Cadeiras, Ahmed Alaa and Mihaela van der Schaar, "Personalized Survival Predictions via Trees of Predictors: An Application to Cardiac Transplantation," *PLOS One* (2019).
- 97. Jinsung Yoon, William R. Zame and Mihaela van der Schaar, "ToPs: Ensemble Learning with Trees of Predictors," *IEEE Transactions on Signal Processing* (2018).
- Jinsung Yoon, William R. Zame and Mihaela van der Schaar, "Estimating Missing Data in Temporal Data Streams Using Multi-Dimensional Recurrent Neural Networks," *IEEE Transactions in Biomedical Engineering* (2018)
- Onur Atan, William R. Zame and Mihaela van der Schaar, "Constructing Effective Personalized Policies Using Counterfactual Inference from Biased Data Sets with Many Features," *Machine Learning* (2018).
- 100.Kartik Ahuja, Mihaela van der Schaar and William R. Zame, "Working Alone and Working with Others: Implications for the Malthusian Era," *Economic Theory* (Accepted and to Appear).

#### **CONFERENCE PUBLICATIONS**

(Conferences are the preferred venues for publications in artificial intelligence and machine learning)

101. Khoa Phan Tran, Mihaela van der Schaar and William R. Zame, "Secret Information in Communication Networks," *IEEE CDC* (2011).

- 102.J. Xu, William R. Zame and Mihaela van der Schaar, "Token Based Incentive Protocol Design for Online Exchange Systems," *GameNets* (2012).
- 103. William Zame, Jie Xu and Mihaela van der Schaar, "Learning Perfect Coordination with Minimal Feedback in Wireless Multi-Access Communications," *IEEE Globecom* (2013).
- 104. Jinsung Yoon, William R. Zame and Mihaela van der Schaar, "Multi-directional Recurrent Neural Networks: A Novel Method for Estimating Missing Data," *International Conference on Machine Learning* (ICML 2017).
- 105. Amitava Banerjee, Jinsung Yoon, William R. Zame, Martin Cadeiras, Ahmed Alaa and Mihaela van der Schaar, "Personalized Risk Prediction using Predictive Pursuit Machine Learning: A Pilot Study in Cardiac Transplantation," *European Society of Cardiology Congress* (2017).
- 106.Kartik Ahuja, William R. Zame and Mihaela van der Schaar, "DPSCREEN: Dynamic Personalized Screening," *31<sup>st</sup> Conference on Neural Information Processing Systems* (NIPS 2017).
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#### **BOOK CHAPTERS**

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