

CURRICULUM VITAE

Andrew McLennan

Citizenship: United States

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Education: B.A. in Mathematics, University of Chicago, 1976
Ph.D. in Economics, Princeton University, 1982
Thesis Advisor: Hugo Sonnenschein

Employment History:

- Emeritus Professor, University of Queensland, School of Economics, 2021 - present.
- Professor, University of Queensland, School of Economics, 2007 - 2020. (ARC Professorial Fellow 2007 - 2012.)
 - Visiting Scholar, Kyoto Institute for Economic Research, Kyoto University, March - December 2013.
 - Visiting Scholar, University of British Columbia, January - March 2013.
 - Visiting Scholar, Kyoto Institute for Economic Research, Kyoto University, March - June 2010.
- Professor, University of Sydney, Discipline of Economics, 2005 - 2007.
- Professor, University of Minnesota, Department of Economics, 2000 - 2005.
 - Visiting Scholar, Economic Theory Center, University of Melbourne, May 2005.
 - Visiting Foreign Scholar, Institute for Social and Economic Research, Osaka University, April, June - August 2005.
 - Visiting Scholar, Economic Theory Center, University of Melbourne, November 2003.
 - Visiting Foreign Scholar, Institute for Social and Economic Research, Osaka University, January - June 2002.
 - Visiting Professor, University of Chicago, Department of Economics, Fall 2001.
- Associate Professor, University of Minnesota, Department of Economics, 1987 - 2000.
 - Visiting Associate Professor, Caltech, January - March 1998.
 - Benjamin Meaker Visiting Professor, University of Bristol, June - September 1997.
- Assistant Professor, Cornell University, Department of Economics, 1985 - 1987.

- Postdoctoral Fellow, Mathematical Science Research Institute, January - June 1986.
- Assistant Professor, University of Toronto, Department of Political Economy (later the Department of Economics), 1980 - 1985.
 - Visiting Assistant Professor, Cornell University, Department of Economics, 1984-85 academic year.
 - Visiting Assistant Professor, University of Minnesota, Department of Economics, 1981-82 academic year.
- Research Assistant, Resources for the Future, Washington, D.C., Summer of 1977.

Courses Taught:

University of Toronto, 1980 - 1981

Industrial Organization

Government Policy Toward Business

Advanced Microeconomics

Mathematical Economics (joint undergraduate and graduate)

University of Minnesota, 1981 - 1982

Mathematical Economics (graduate)

Topics in Mathematical Economics (graduate)

University of Toronto, 1982 - 1984

Advanced Microeconomics (both years)

Game Theory and Economic Strategy (both years)

Cornell University, 1984 - 1987

Intermediate Mathematical Economics I (graduate)

The Theory of Market Failure

Intermediate Mathematical Economics II (Optimal Control - graduate)

Noncooperative Game Theory (graduate)

Intermediate Microeconomics

Mathematical Economics I (undergraduate)

Mathematical Economics (graduate)

Caltech, 1998

Economics of Information and Uncertainty

University of Minnesota, 1987 - 2004

Advanced Topics in Microeconomics (game theory, two quarters)

Noncooperative Game Theory

Mathematical Economics (both undergraduate and graduate)

Graduate Microeconomic Theory

Topics in Microeconomics: Computation of Nash Equilibrium

Topics in Microeconomics: Core and Bargaining Set

Theory/Finance Graduate Student Workshop

University of Sydney, 2006

Mathematical Methods of Economic Analysis
Strategic Behavior
Financial Economics
University of Queensland, 2014-2017
Microeconomics B (Honours)
Advanced Mathematical Techniques for Economics
Managerial Economics
Quantitative Skills for Economics
Economics of Financial Markets

Honors and Awards:

- Fellow of the Econometric Society, from 2007.
- Economic Theory Fellow, Society for the Advancement of Economic Theory, from 2011.
- Fellow of the Academy of the Social Sciences in Australia, from 2011.
- Game Theory Society Fellow, from 2017.

Research Grants:

- Social Sciences and Humanities Research Council of Canada Postdoctoral Fellowship, 1982 - 1983, renewed for 1983–1984.
- Postdoctoral Fellowship, Mathematical Sciences Research Institute, funded by NSF Grants MCS-8120790 and SES-8420114.
- University of Minnesota Single Quarter Leave, Fall Quarter 1991.
- “Computer Software for Solution of Extensive Form Games” (joint with Richard McKelvey) NSF Grant SBR-9308863, 1993–1996.
- “Computer Software for Solution of Extensive Form Games” (joint with Richard McKelvey) NSF Grant SBR-9618057, 1997–1999.
- University of Minnesota College of Liberal Arts Sabbatical Salary Supplement, 2001–2002.
- Australian Research Council Professorial Fellowship, 2007–2012.
- ARC Discovery Project #022876, 2019–2021.

Books:

Advanced Fixed Point Theory for Economics, Springer-Verlag, Berlin, 2018, in press.

Foundations of Microeconomic Theory: a Volume in Honor of Hugo F. Sonnenschein, Springer-Verlag, Berlin, 2008, co-editor with Mathew O. Jackson, (541 pages).

The Nature and Origins of Modern Mathematics: an Elementary Introduction, 2008, unpublished manuscript.

The Algebra of Coherent Algebraic Sheaves, with an Explicated Translation of Serre’s Fascieux Algébrique Cohérent, 2014, unpublished manuscript.

Journal Articles:

- “The Generalized Morse-Sard Theorem,” *Expositiones Mathematicae* (2021) forthcoming.
- “Female Chess Players Show Typical Stereotype Threat Effects: Comment on Stafford (2018),” (joint with Sabina Albrecht, Hairong Hu, David Smerdon, and Bill von Hippel) *Psychological Science* (2020) forthcoming.
- “On Uniqueness of Equilibrium in the Kyle Model,” (joint with Paulo Monteiro and Rabee Tourky) *Mathematics and Financial Economics* **11**(2) (2017) 161–172.
- “The Market for Liars: Reputation and Auditor Honesty,” (joint with In-Uck Park) *International Journal of Economic Theory* **12** (2016) 49–66.
- “Corrigendum to: Discounted Stochastic Games with No Stationary Equilibrium: Two Examples,” (joint with Yehuda Levy) *Econometrica* **83** (2015) 1237–1252.
- “Fixed Points of Parameterized Perturbations,” *Journal of Mathematical Economics* **55** (2014) 186–189.
- “Uniqueness of Stationary Equilibrium Payoffs in Coalitional Bargaining,” (joint with Hulya Eraslan) *Journal of Economic Theory* **148** (2013) 2195–2222.
- “Truthful Implementation and Aggregation of Preferences in Flexible Domains,” (joint with Juan Carlos Carbajal and Rabee Tourky) *Journal of Economic Theory* **148** (2013) 1074–1101.
- “Games with Discontinuous Payoffs: a Strengthening of Reny’s Existence Theorem,” (joint with Paulo Monteiro and Rabee Tourky) *Econometrica* **79**:5 (2011) 1643–1664.
- “Manipulation in Elections with Uncertain Preferences,” *Journal of Mathematical Economics* **47**:3 (2011) 370–375.
- “Simple Complexity from Imitation Games,” (joint with Rabee Tourky) *Games and Economic Behavior* **68**:2 (2010) 683–688.
- “Imitation Games and Computation,” (joint with Rabee Tourky) *Games and Economic Behavior* **70**:1 (2010) 4–11.
- “Using Volume to Prove Sperner’s Lemma,” (joint with Rabee Tourky) *Economic Theory* **35**:3 (2008) 593–597. (This proof was nominated for inclusion in God’s Book of Proofs by Sergei Tabachnikov in “Proofs (Not) from the Book,” *Mathematical Intelligencer* **36**:2 (2014) 9–14.)
- “Games in Oriented Matroids,” (joint with Rabee Tourky) *Journal of Mathematical Economics* **44**:7–8 (2008) 807–821.
- “Fixed Point Theorems,” entry in *The New Palgrave Dictionary of Economics* (Second Edition), (2007).
- “Computation of Equilibria in Noncooperative Games,” (joint with Salman Azhar and John Reif) *Computer and Mathematics with Applications* **50**:5-6 (2005) 823–854.
- “The Erdős-Sós Conjecture for Trees of Diameter Four,” *Journal of Graph Theory* **49**:4 (2005) 291–301.

- “The Asymptotic Expected Number of Nash Equilibria of Two Player Normal Form Games,” (joint with Johannes Berg) *Games and Economic Behavior* **51** (2005) 264–295.
- “The Expected Number of Nash Equilibria of a Normal Form Game,” *Econometrica* **73** (2005) 141–174.
- “Strategic Candidacy for Multivalued Voting Procedures,” (joint with Hülya Eraslan) *Journal of Economic Theory* **117** (2004) 29–54.
- “Ordinal Efficiency and the Polyhedral Separating Hyperplane Theorem,” *Journal of Economic Theory* **105** (2002) 435–449.
- A review of Ariel Rubinstein’s *Economics and Language*, *Journal of Economic Literature* **40** (June 2002) 522–524.
- A review of Douglas Gale’s *Strategic Foundations of General Equilibrium: Dynamic Matching and Bargaining Games*, *Journal of Economic Literature* **40** (March 2002) 163–165.
- “The Expected Number of Real Roots of a Multihomogeneous System of Polynomial Equations,” *American Journal of Mathematics* **124** (2002) 49–73.
- “Generic Finiteness of Equilibrium Outcome Distributions in Game Forms” *Econometrica* **69-2** (2001) 455–471 (joint with Srihari Govindan).
- “Permutations with Roots,” *Random Structures and Algorithms* **40-2** (September 2000) 157–167. (joint with Miklós Bóna and Dennis White).
- “The Maximal Number of Real Roots of a Multihomogeneous System of Polynomial Equations,” *Beiträge zur Algebra und Geometrie* **40-2** (1999) 343–350.
- “Generic 4×4 Two Person Games Have At Most 15 Equilibria” *Games and Economic Behavior* **26-1** (January 1999) 111–130 (joint with In-Uck Park).
- “Consequences of the Condorcet Jury Theorem for Beneficial Information Aggregation by Rational Agents,” *American Political Science Review* **92-2** (June 1998) 413–418.
- “The Maximal Number of Regular Totally Mixed Nash Equilibria,” *Journal of Economic Theory* **72** (1997) 411–425. (joint with Richard McKelvey)
- “The Maximal Generic Number of Pure Nash Equilibria,” *Journal of Economic Theory* **72** (1997) 408–410.
- “Computation of Equilibria in Finite Games” in *The Handbook of Computational Economics, Vol. I*, ed. by H. Amman, D. A. Kendrick, and J. Rust, Elsevier (1996) 87–142. (joint with Richard McKelvey)
- “On the Representability of C^r Preferences by Utility Functions,” *Economic Theory* **6** (1995) 357–363.
- “Stationary Markov Equilibria,” *Econometrica* **62** (1995) 745–781. (joint with Darrell Duffie, John Geanakoplos, and Andreu Mas-Colell)
- “On the Generic Finiteness of Equilibrium Outcome Distributions in Game Forms,” in *Game Theory and Economic Applications*, ed. by B. Dutta *et al*, Springer-Verlag (1992).

- “Sequential Bargaining as a Noncooperative Foundation for Walrasian Equilibrium,” *Econometrica* **59** (1991) 1395–1424. (joint with Hugo Sonnenschein)
- “Approximation of Contractible Valued Correspondences by Functions,” *Journal of Mathematical Economics* **20** (1991) 591–598.
- “Binary Stochastic Choice,” Ch. 7 in *Preferences, Uncertainty, and Optimality: Essays in Honor of Leonid Hurwicz*, ed. by J.C. Chipman, D. McFadden, and M.K. Richter, Westview Press, 1990.
- “Fixed Points of Contractible Valued Correspondences,” *International Journal of Game Theory* **18** (1989) 175–184.
- “Consistent Conditional Systems in Noncooperative Game Theory,” *International Journal of Game Theory* **18** (1989) 141–174.
- “The Space of Conditional Systems is a Ball,” *International Journal of Game Theory* **18** (1989) 125–139.
- “Justifiable Beliefs in Sequential Equilibrium,” *Econometrica* **53** (1985) 889–904.
- “Price Diversity and Incomplete Learning in the Long Run,” *Journal of Economic Dynamics and Control* **7** (1984) 331–347.
- “Randomized Preference Aggregation: Additivity of Power and Strategy Proofness,” *Journal of Economic Theory* **22** (1980) 1–11.
- “Examples of von Neumann-Morgenstern Utility Functions Not Recoverable from Asset Demands,” *Economics Letters* **3** (1979) 149–152.

Book Chapters:

- “Dynamics, Instability, and the Fixed Point Index,” in *Equilibria in Games: Existence, Selection, and Dynamics* (ed. Alejandro Jofré, Sylvain Sorin, and Bernhard von Stengel) 2020 (forthcoming).

Other Writings:

- “Efficient Disposal Equilibrium in Pseudomarkets,” May 2018.
- “The Index +1 Principle,” August 2017.
- “Some People Never Learn, Rationally: Multidimensional Learning Traps,” June 2015 (joint with Simon Loertscher).
- “The Computational Complexity of Games and Markets: an Introduction for Economists,” December 2011.
- “On the Mean Number of Facets of a Gaussian Polytope,” December 2011.
- “Generic Finiteness of Outcome Distributions for Two Person Game Forms with Zero Sum and Common Interest Utilities,” April 1999 (joint with Srihari Govindan).
- “On the Definition of Orbifolds,” April 1992.
- “Round Immersions,” April 1990.
- “Incomplete Learning in a Repeated Statistical Decision Problem,” University of Minnesota, October 1987.
- “Subform Perfection,” Cornell University, October 1985.

“Bargaining Between Two Symmetrically Informed Agents,” Cornell University, 1986.
“Government Bankruptcy as a Result of Deficit Spending,” Cornell University, August 1986.
“Game with Communication,” University of Minnesota Discussion Paper No. 82-161, April 1982.

Essays in Economic Theory (Princeton Doctoral Thesis)

1. A General Noncooperative Theory of Bargaining.
2. Equivalence and Limit Theorems for Efficient Envy Free Allocations.
3. Price Diversity When the Demand Curve is Unknown.

Software

Gambit, a software system, including a graphical interface and a programming language, for the description, manipulation, and solution of finite normal form and extensive form games. (joint with Richard McKelvey, Ted Turocy, and numerous other programmers.)

IGPackage, a software package that provides C code for finding a system of equations with the number of unknowns equal to the number of equations, based on an algorithm for computing a fixed point due to myself and Rabee Tourky. It is intended for inclusion in larger software systems that need to solve such systems. The code was written by Colin Ramsay, and the manual was written by Colin and Andrew McLennan.

Editorial Service

- Associate Editor of *Econometrica*, three year terms beginning July 1992, July 1995, July 2011, July 2014, and July 2017.
- Associate Editor of the *International Journal of Game Theory*, 2001-2011 and 2015-present.
- Associate Editor of the *Journal of Mathematical Economics*, 2001-2011.
- Coeditor of the *International Journal of Economic Theory*, 2004-2017.
- Associate Editor of *Games and Economic Behavior*, 2004-present.
- Associate Editor of *New Zealand Economic Papers*, 2008-present.

Other Professional Service

- Co-organizer (with Tim Kehoe) of the NBER General Equilibrium Conference, April 1992.
- Organizer of sessions in mathematical economics, Econometric Society Summer Meetings, Boston, June 1993.
- Co-organizer (with Ray Riezman) of the Midwest Theory and International Trade Conference, Minneapolis, October 2000.
- Board Member, Economic Design Network, 2006 - 2007.

- Program Committee Member, Frontiers of Algorithmics Workshop 2008 and 2009.
- Program Committee Member, Econometric Society Australasian Meetings 2011 and 2012.
- Member, Council of the Econometric Society, 2010-2012 and 2013-2015.
- Chair, Standing Committee of the Australasian Econometric Society, 2010-2018.
- Member, Standing Committee of the Australasian Econometric Society, 2008-2018.
- Member, Council of the Game Theory Society, 2012-2017.
- Member, Fellows Nominating Committee of the Econometric Society, 2014 and 2015
- Member, Executive Committee of the Econometric Society, 2015-2018.
- Program Committee Member, Games 2016.
- Member, Econometric Society Committee for Summer Schools, 2019.

University Service

- University of Minnesota College of Liberal Arts (CLA) Assembly 1991-93, 1994-96.
- CLA Course Review Committee 1991-93.
- CLA Budget Advisory Committee 1994-96.
- CLA Committee on Curriculum, Instruction, and Advising 1997-99.
- CLA Committee on Information Technology 1998-2001 (Chair, 2000-2001).
- Council on Liberal Education, 1998-2000.

Departmental Administration

- Director of Graduate Studies, University of Minnesota, 2000-2003.
- Director of Research, School of Economics, University of Queensland, 2008-2012.
- Chair, Professorial Committee, University of Queensland, 2014-2018.
- Chair, Junior Recruiting Committee, UQ School of Economics, various years.

Ph.D. Supervision

University of Minnesota

- In-Uck Park (joint with Ed Green)
- Ted Temzelides (joint with Ed Green)
- Patrick Bajari (joint with John Geweke)
- Kiho Yoon
- Tongwook Park
- Jin Kim
- Mehmet Barlo
- Patrick Leoni
- Han Ozsoylev (joint with Jan Werner)
- Carl Coscia
- Nevzat Eren (joint with Jan Werner and Marcel Richter)

University of Melbourne

- Yuelan Chen (joint with Peter Bardsley)

University of Queensland

Terence Yeo (joint with Shino Takayama)

Thi Thao Nguyen (joint with Shino Takayama, in progress)

Nhan Phan (joint with Shino Takayama, in progress)

Yuqing Liu (joint with Shino Takayama and Jorge Miranda-Pinto, in progress)

Diego Carrasco (joint with Shino Takayama and Allan Hernandez Chanto, in progress)

Masters Supervision

University of Queensland

Alexander Cameron

Thi Thao Nguyen

Sihyun Kim

Weiqi Wang

Honours Supervision

University of Sydney

David Quach

University of Queensland

Lucy Yeh (joint with Shino Takayama)

Benjamin Young (joint with Shino Takayama)

Nhan Phan (joint with Shino Takayama)

SCIE3251 Introduction to Research in Mathematics/Physics

University of Queensland

Angus Wren