

# Federico Echenique

Division of the Humanities and Social Sciences  
California Institute of Technology  
Pasadena, CA 91125

## Degrees

PhD Economics 1996-2000, [U.C. Berkeley](#). Advisors: [Ilya Segal](#) and [Chris Shannon](#).  
Dissertation Title: “Essays in Monotone Comparative Statics and the Theory of Games of Strategic Complementarities.”

Licenciado en Economía 1990-1995, [Universidad de la República](#).

## Employment

Allen and Lenabelle Davis Professor of Economics and Social Sciences, July 2016 –  
Division of the Humanities and Social Sciences. California Institute of Technology.  
(Professor of Economics, 2010 – May 2016; Associate Professor of Economics,  
2004-2010; Instructor in Economics, 2002 – 2004.)

Assistant Professor, Departamento de Economía, Facultad de Ciencias Sociales,  
Universidad de la República. 2000 – 2002.

Assistant Professor. Departamento de Economía, Universidad Torcuato Di Tella, 2001 –  
2002.

Visiting Assistant Professor, Department of Economics, U.C. Berkeley, Spring 2001.

## Awards

Fellow, Game Theory Society, 2019.

2017-2018 Pension Research Council/TIAA Institute Partnership Grant. Co-PI with  
Kota Saito.

Fellow, Society for the Advancement of Economic Theory, 2016.

NSF Grant SES-1558757, “Choices under uncertainty,” 2016-2019. Co-PI with Kota  
Saito.

NSF Grant CNS-1518941, “Networked markets: theory and applications” 2015–2020.  
Co-PI with Matt Elliott, John Ledyard, Katrina Ligett, and Adam Wierman.

NSF Grant CCF-1101470 “A revealed preference approach to computational complexity  
in economics,” 2011-2013 Co-PI with Adam Wierman.

Morosoli Prize (Uruguay), 2011.

NSF Grant SES-0751980, “Revealed Preference Tests in Individual and Collective Choice,” 2008-2010. Co-PI with Chris Chambers.

Elliot J. Swan Prize, 1998. Department of Economics, UC Berkeley.

1996-2000, Graduate Dean’s Fellowship. UC Berkeley.

1996-1998, Fulbright-Laspau Fellowship.

## Book

“Revealed Preference Theory” (joint with Chris Chambers); January, 2016 (Econometric Society Monograph; Cambridge University Press).

## Refereed conference proceedings (computer science)

1. “Third-Party Data Providers Ruin Simple Mechanisms” (joint with Yang Cai, Hu Fu, Katrina Ligett, Adam Wierman, and Juba Ziani); Forthcoming, ACM SIGMETRICS 2020.
2. “[Incentive compatible active learning](#)” (with Siddharth Prasad). 11th Innovations in Theoretical Computer Science Conference (ITCS 2020). Pages 67:1–67:20.
3. “[Learnability and models of decision making under uncertainty](#)” (with Pathikrit Basu). *Proceedings of the 2018 ACM Conference on Economics and Computation (EC 2018)*. Pages 53-53 (Ext. abst.)
4. “[The Complexity of Nash Equilibria as Revealed by Data](#)” (with Siddharth Barman, Umang Bhaskar, and Adam Wierman), [arXiv:1311.2655](#) *Proceedings of the 10th WINE Conference, 2014*.
5. “[The empirical implications of privacy-aware choice](#)” (with Rachel Cummings and Adam Wierman). [arXiv:1401.0336](#) *Proceedings of the 15th ACM Conference on Electronic Commerce, 2014 (EC 14)*. (Ext. abst.)
6. “[The Empirical Implications of Rank in Bimatrix Games](#)” (joint with Siddharth Barman, Umang Bhaskar, and Adam Wierman) *Proceedings of the 14th ACM Conference on Electronic Commerce, 2013 (EC 13)*.
7. “[Finding a Walrasian Equilibrium is Easy for a Fixed Number of Agents](#)” joint with Adam Weirman. *Proceedings of the 13th ACM Conference on Electronic Commerce, 2012 (EC 12)*.
8. “[A Revealed Preference Approach to Computational Complexity in Economics](#),” joint with Daniel Golovin and Adam Weirman. *Proceedings of the 12th ACM Conference on Electronic Commerce, 2011 (EC 11)*.

**Journal publications**

9. “On the falsifiability and learnability of decision theories” (with Pathikrit Basu). Forthcoming, *Theoretical Economics*
10. “Testable Implications of Models of Intertemporal Choice: Exponential Discounting and Its Generalizations” (joint with Kota Saito and Taisuke Imai), Forthcoming, *American Economic Journal: Microeconomics*
11. ”The Pareto comparisons of a group of exponential discounters” (joint with Chris Chambers). Forthcoming, *Mathematics of Operations Research*.
12. “General Luce Model” (joint with Kota Saito) *Economic Theory* Volume 68, pages 811–826 November 2019
13. “On multiple discount rates” (joint with Chris Chambers) *Econometrica*. Volume 86, No. 4 July 2018 pp. 1325–1346.
14. “The Perception Adjusted Luce Model” (joint with Kota Saito and Gerelt Tserenjigmid), *Mathematical Social Sciences*. Volume 93. May 2018, pp. 67–76.
15. “On path independent stochastic choice” (joint with David Ahn and Kota Saito) *Theoretical Economics*. Volume 13(1); pages 61–86, 2018
16. “A characterization of combinatorial demand” (joint with Chris Chambers). *Mathematics of Operations Research*. Volume 43(1); pages 222-227, 2018.
17. “Response time and utility” (joint with Kota Saito) *Journal of Economic Behavior and Organization* Volume 139, July 2017, Pages 49-59.
18. “General Revealed Preference Theory” (joint with Chris Chambers and Eran Shmaya). *Theoretical Economics*. 12 (2017), 493–511
19. “Testing theories of financial decision making ” (joint with Chris Chambers and Kota Saito) *Proceedings of the National Academy of Sciences*, April 2016, Volume 114, number 15, pages 4003-4008.
20. “Clearinghouses for two-sided matching: An experimental study” (with Alistair Wilson and Leat Yariv) *Quantitative Economics* Volume 7(2) July 2016.
21. “Ordinal and cardinal solution concepts for two-sided matching” (joint with Alfred Galichon), *Games and Economic Behavior*. Volume 101(1), January 2017, pages 63-77.
22. “The empirical implications of privacy-aware choice” (with Rachel Cummings and Adam Wierman). *Operations Research*, 2016 Volume 64, number 1, pages 67–78.

23. "Savage in the market" (joint with Kota Saito), *Econometrica*, Volume 83, No. 4, July, 2015, pages 1467-1495; DOI: 10.3982/ECTA12273.
24. "Efficiency and Bargaining Power in the Interbank Loan Market" (with Jason Allen, James Chapman, and Matt Shum). *International Economic Review*, Volume 57(2), April 2016, pages 1468-2354.
25. "How to control controlled school choice" (joint with Bumin Yenmez), *American Economic Review*, Volume 105(8), August 2015, pages 2679-94.
26. "Strategic complementarity and unraveling in matching markets" (joint with Juan Pereyra). *Theoretical Economics* Volume 11, Number 1 (January 2016), pages 1-39.
27. "The Axiomatic Structure of Empirical Content" (joint with Chris Chambers and Eran Shmaya). *American Economic Review* Volume 104, Issue 8, August 2014, pages 2303-19.
28. "Core Matchings of Markets with Transfers" (joint with Chris Chambers). *American Economic Journal: Microeconomics*, Volume 7, Number 1 (February 2015). Pages 144-64.
29. "Partial identification in two-sided matching models" (with SangMok Lee, and Matt Shum) *Structural Econometric Models; Advances in Econometrics* Volume 31, 2013, pp.117 - 139.
30. "A Test for Monotone Comparative Statics" (joint with Ivana Komunjer). *Structural Econometric Models; Advances in Econometrics* Volume 31, 2013, pp.183 - 232 (Winner of "Outstanding contribution" prize awarded by the publisher.)
31. "On the consistency of data with bargaining theories" (joint with Chris Chambers) *Theoretical Economics* Volume 9, Number 1 (January 2014), pp 137-162.
32. "When does aggregation reduce risk aversion?" (joint with Chris Chambers) *Games and Economic Behavior* Volume 76, Issue 2, November 2012, Pages 582-595.
33. "The Revealed Preference Theory of Stable and Extremal Stable Matchings" (joint with SangMok Lee, Matthew Shum, and Bumin Yenmez) *Econometrica*. Volume 81, No. 1 (January 2013), pp 153-171.
34. "Contracts vs. Salaries in Matching." *American Economic Review* Volume 102, Issue 1, February 2012, pages 594-601.
35. "The Money Pump as a Measure of Revealed Preference Violations" (joint with SangMok Lee and Matthew Shum) *Journal of Political Economy* Vol. 119, No. 6, December 2011.

36. “Testable Implications of Efficiency for Two-Agent (Household) Choice” (joint with Lozan Ivanov). *Journal of Mathematical Economics* Volume 47, Issue 2, March 2011, pp 129-136.
37. “Testable Implications of Gross Substitutes in Demand” (joint with Chris Chambers and Eran Shmaya). *American Economic Journal: Microeconomics* Vol. 3, No. 1, February 2011, pp 129-36.
38. “On Behavioral Complementarity and its Implications” (joint with Chris Chambers and Eran Shmaya). *Journal of Economic Theory* Volume 145, Issue 6, November 2010, Pages 2332-2355.
39. “Testing Models with Multiple Equilibria by Quantile Methods” (joint with Ivana Komunjer). *Econometrica* Volume 77 Issue 4, July 2009, pp 1281-1298.
40. “Sequential Entry in Many-to-one Matching Markets” (joint with Elette Boyle). *Social Choice and Welfare*, Volume 33, issue 1, June 2009, pp 87-99.
41. “English Auctions and the Stolper–Samuelson Theorem” (joint with Juan Dubra and Alejandro Manelli). *Journal of Economic Theory* Volume 144, Issue 2, March 2009, Pages 825-849.
42. “Supermodularity and Preferences” (joint with Chris Chambers). *Journal of Economic Theory* Volume 144, Issue 3, May 2009, Pages 1004-1014.
43. “Ordinal Notions of Submodularity” (joint with Chris Chambers). *Journal of Mathematical Economics* Volume 44, Issue 11, December 2008, pages 1243-1245.
44. “What Matchings can be Stable ? The Testable Implications of Matching Theory.” *Mathematics of Operations Research* Volume 33 Issue 3, August 2008. Pages 757-768.
45. “Profit Maximization and Supermodular Technology” (joint with Chris Chambers). *Economic Theory* Volume 40, Number 2, August, 2009, pp 173-183.
46. “An Explanation of Inefficient Redistribution: Transfers Insure Cohesive groups” (joint with Jon Eguia). *Quarterly Journal of Political Science*. Volume 2, Issue 4, November, 2007, pages 287-305.
47. “A Measure of Segregation Based on Social Interactions” (joint with Roland Fryer). *Quarterly Journal of Economics*. Volume 122, Issue 2, May 2007, pages 441-485.
48. “A Solution to Matching with Preferences over Colleagues” (joint with M. Bumin Yenmez). *Games and Economic Behavior*. Volume 59, number 1, April 2007, pages 46-71.

49. "Finding All Equilibria in Games with Strategic Complements." *Journal of Economic Theory*. Volume 135, Issue 1, July 2007, Pages 514-532.
50. "Counting Combinatorial Choice Rules." *Games and Economic Behavior*. Volume 58, Issue 2, February 2007, Pages 231-245..
51. "A Theory of Stability in Many-to-many Matching Markets" (joint with Jorge Oviedo) *Theoretical Economics*. Volume 1, Issue 2, June 2006, Pages 233-273.
52. "A Constructive Proof of Tarski's Fixed-point Theorem," *International Journal of Game Theory*. Volume 33, Issue 2, June 2005, Pages 215-218.
53. "Mixed Equilibria in Games of Strategic Complements are Unstable" (with Aaron Edlin). *Journal of Economic Theory*. Volume 118, Issue 1, September 2004, Pages 61-79.
54. "Core Many-to-one Matchings by Fixed Point Methods" (with Jorge Oviedo) *Journal of Economic Theory*. Volume 115, Issue 2 , April 2004, Pages 358-376
55. "Measurability is not about Information" (with Juan Dubra) *Mathematical Social Sciences*. Volume 47, Issue 2, March 2004. Pages 177-185.
56. "A Weak Correspondence Principle for Models with Complementarities," *Journal of Mathematical Economics* Volume 40, Issues 1-2, pages 145–152, February 2004.
57. "A Characterization of Strategic Complementarities" *Games and Economic Behavior*. Volume 46, Issue 2, Pages 325-347, February 2004.
58. "Extensive-Form Games of Strategic Complementarities" *Games and Economic Behavior* Volume 46, Issue 2, Pages 348-364, February 2004.
59. "Strong Comparative Statics of Equilibria" (with Tarun Sabarwal). *Games and Economic Behavior*. Volume 42, Issue 2, Pages 307-314, February 2003.
60. "Mixed Equilibria in Games with Strategic Complementarities." *Economic Theory* v22(1) 2003, pp33-44.
61. "The Equilibrium Set of a Two-player game with Complementarities is a Sublattice." *Economic Theory* v22(4) 2003, pp903-905.
62. "Comparative Statics by Adaptive Dynamics and The Correspondence Principle." *Econometrica* v70(2), pp 833–844. March, 2002.
63. "Monotone Preferences over Information" (with Juan Dubra). *Topics in Theoretical Economics*: Vol. 1, No. 1, Article 1.

64. "Are Stabilization Programs Expansionary ?" (with Alvaro Forteza). *Estudios Económicos* v15(1), January-June, 2000.

### Non-refereed publications

65. "New developments in revealed preference theory: decisions under risk, uncertainty, and intertemporal choice" Forthcoming, *Annual Reviews of Economics*
66. "Complexity and Economics: computational constraints may not matter," joint with Daniel Golovin and Adam Weirman, ACM SIGecom Exchanges, Volume 10, Number 1, March 2011.
67. "The Correspondence Principle." *The New Palgrave Dictionary of Economics*, 2nd Edition (2008). Editors: Steven D. Durlaud and Lawrence E. Blume. Palgrave MacMillan.
68. "Is School Segregation Good or Bad?" (joint with Roland Fryer and Alex Kaufman) *American Economic Review, Papers and Proceedings*, Volume 96, Issue 2, May 2006, Pages 265-269.

### Working Papers

69. "Top of the Batch: Interviews and the Match" (with Ruy Gonzalez, Alistair Wilson and Leeat Yariv) [arXiv:2002.05323](https://arxiv.org/abs/2002.05323) Feb 2020
70. "Constrained pseudo-market equilibrium" (with Antonio Miralles and Jun Zhang); [arXiv:1909.05986](https://arxiv.org/abs/1909.05986) Oct 2019
71. "Recovering Preferences from Finite Data" (with Chris Chambers and Nico Lambert); [arXiv:1909.05457](https://arxiv.org/abs/1909.05457) Oct 2019
72. "Decision Making under Uncertainty: An Experimental Study in Market Settings" (with Taisuke Imai and Kota Saito) [arXiv:1911.00946](https://arxiv.org/abs/1911.00946) Nov 2019
73. "Spherical preferences" (with Chris Chambers ) [arXiv:1905.02917](https://arxiv.org/abs/1905.02917) May 2019
74. "The Edgeworth Conjecture with Small Coalitions and Approximate Equilibria in Large Economies" (with Siddarth Barman). [arXiv:1905.05165](https://arxiv.org/abs/1905.05165) February 2019
75. "Approximate expected utility rationalization" (joint with Taisuke Imai and Kota Saito). Caltech SSWP 1441.

76. “A characterization of Phelpsian statistical discrimination” (joint with Chris Chambers). Caltech SSWP 1440. [arXiv:1808.01351](https://arxiv.org/abs/1808.01351)
77. “Statistical discrimination and affirmative action in the lab” (joint with Ahrash Dianat and Leeat Yariv). Caltech SSWP 1439.
78. “Fairness and efficiency for probabilistic allocations with endowments” (joint with Antonio Miralles and Jun Zhang). December 2017, Caltech SS Working Paper 1434. [arXiv:1908.04336](https://arxiv.org/abs/1908.04336)
79. “Preference identification” (joint with Chris Chambers and Nico Lambert) Caltech SS Working Paper 1428.
80. “Testing for separability is hard.” [arXiv:1401.4499](https://arxiv.org/abs/1401.4499)
81. “An Experimental Study of Decentralized Matching” (joint with Leeat Yariv).
82. “You Won’t Harm Me If You Fool Me” (joint with Eran Shmaya) Caltech SS Working Paper 1281.

## Advising

1. Sumit Goel
2. Hamed Hamze
3. Tatiana Mayskaya
4. Jun Zhang
5. Marcelo Fernandez
6. Jackie Zhang
7. Gerelt Tserenjigmid
8. Khai Chiong,
9. Matt Kovach,
10. Juan Pereyra,
11. Emerson Melo,
12. SangMok Lee,
13. Noah Myung,

14. Laurent Mathevet.

Postdocs (co-adviser): Kevin He, Pathikrit Basu, Teddy Mekonnen, Hu Fu, Sid Barman, Yakov Babichenko, Umang Bhaskar, Eran Shmaya, Daniel Golovin, Ahuva Mu'alem, Ron Lavi.

Dissertation committee member: Alejandro Robinson, Vadim Martinov, Rachel Cummings (computer science), Juba Ziani (computer science), Sergio Montero, Euncheol Shin, Kirill Pogorelskyi, Muruvvet I. Buyukboyaci, Paul J. Healy, Jernej Copic, Serkan Kucuksenel, Shankar Kalyanaram (computer science), David Young, Guido Maretto, and Mohamed Mostagir.

Undergraduate Research Advisor: Siddarth Prasad, Teresa Riedel, Ruy Gonzalez, Elette Boyle, Patrick Hummel, Lozan Ivanov, Brett Kassof, Kevin Trotter, and M. Bumin Yenmez.

### Professional service

- arXiv moderator for theoretical economics (2019 –)
- Co-organizer of the Simons Institute for the Theory of Computing semester on Online Market Design (Fall 2019; joint with Itai Ashlagi, Nicole Immorlica, Vijay Vazirani, and Leeat Yariv).
- Editorial Boards:
  - Theoretical Economics (Coeditor 2019 –)
  - American Economic Review (Associate Editor 2018 –)
  - Econometrica (Associate Editor 2016 – 2019)
  - ACM Transaction on Economics and Computation (Associate Editor 2013 – 2019)
  - Latin American Economic Review (Advisory board 2013–)
  - Journal of Economic Theory (Associate Editor 2013 – 2019)
  - BE Journal of Theoretical Economics (Coeditor, 2007-2013)
  - Economic Journal (Associate Editor, 2012 – 2017)
  - Economic Theory (Associate Editor, 2009 –)
  - Decisions in Economics and Finance (Assoc Editor, 2012 – 2019).
- Member of the council of the Game Theory Society: 2013-.

- Co-organizer of: the Caltech Mini-conferences on repeated games, political economy, social networks and matching theory (2005-2008); the Caltech mini-conference on decision theory (2012, 2016); the Southwest Economic Theory Conference in Caltech, 2009; the Ticino Conference on Matching theory (2012).
- Program Committees: Decentralization Conference (2009), Latin American Econometric Society Meetings (2009, 2012, 2017), Latin American Economic Association meetings (2010, 2016), Society for Algorithmic Game Theory (refereed; 2009), ACM Conference on Economics and Computation (refereed; 2012, 2013, 2015, 2016, 2017, 2018, 2019, 2020). ACM Conference on Economics and Computation: senior program committee (2017). Social Choice and Welfare (2020). Econometric Society World Congress (2020).
- Referee for over 30 different journals and grant agencies. Excellence in refereeing award, American Economic Review, in 2012, 2013, 2016, and 2017.