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CURRICULUM VITAE

José A. Scheinkman

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Columbia University

ACADEMIC BACKGROUND

B.A. in Economics (1969) Universidade Federal do Rio de Janeiro, Brazil.
M.S. in Mathematics (1970) Instituto de Matemática Pura e Aplicada, Brazil.
M.A. in Economics (1973) University of Rochester, Rochester, New York.
Ph.D. in Economics (1974) University of Rochester, Rochester, New York.

HONORS

Fellow, [Econometric Society](#) (elected 1978).
Fellow, [American Academy of Arts and Sciences](#) (elected 1992).
Docteur honoris causa, [Université Paris-Dauphine](#) (2001).
[Blaise Pascal Chair](#), France (2002).
Fellow, [John Simon Guggenheim Memorial Foundation](#) (2007).
Member, [National Academy of Sciences](#) (elected 2008), Chair of Section 54 (Economic Sciences) (2012-2015).
Corresponding Member, Brazilian Academy of Sciences (elected 2012)
CME Group-MSRI Prize in Innovative Quantitative Applications (2014)
Economic Theory Fellow, Society for the Advancement of Economic Theory (elected 2016).
Fellow, [American Finance Association](#) (elected 2017).

ACADEMIC POSITIONS

Present Positions: Columbia University: Charles and Lynn Zhang Professor of Economics 2015- Princeton University: Theodore A. Wells '29 Professor of Economics Emeritus 2013-
Past Positions: Columbia University: Edwin W. Rickert Professor of Economics 2013-2015. Princeton University: Theodore A. Wells '29 Professor of Economics 1999- 2013. University of Chicago: Alvin H. Baum Distinguished Service Professor of Economics, 1997-1999, Chairman of Department of Economics, 1995-1998, Alvin H. Baum Professor of Economics, 1987-1997, Professor of Economics, 1981-1986, Associate Professor of Economics, 1976-1981, Assistant Professor of Economics, 1973-1976, Post-Doctoral Fellow in Political Economy, 1973-1974. Visiting Professorships: Collège de France, 2008; EHESS (Paris), 2003-2004; Princeton University, 1998; CEREMADE, Université Paris-Dauphine, 1985-1994; EPGE, Fundação Getulio Vargas (Rio de Janeiro) 1978-1979; Instituto de Matemática Pura e Aplicada (Rio de Janeiro), 1978-1979.

OTHER POSITIONS

Vice President, Financial Strategies Group, Goldman, Sachs & Co. (New York), 1987-1988; Member, Axiom Investments, 2003-2013; Board of Directors, Cosan Limited and Cosan S.A., 2007-, Board of Directors, TAG, 2021.

PROFESSIONAL SERVICES

Current

Research Associate, National Bureau of Economic Research, 2005-
Fellow Institut Louis Bachelier, 2016-
Member, Editorial Board, *Proceedings of the National Academy of Sciences*, 2010-
Co-editor *Annals of Finance*, 2004-
Member, Editorial Council, *Economia Aplicada*, 1997-
Member, Advisory Board, *Portuguese Economic Journal*, 2000-
Member, Editorial Board, *Quantitative Finance*, 2000-
Member, Advisory Board, *Mathematics and Financial Economics*, 2006-
Member, Advisory Board, Financial Mathematics, Courant Institute of Mathematical Sciences, 1998-

Member, "Conseil Scientifique," Europlace Institute of Finance, 2002-
Member, Governing Board, Stevanovich Center for Financial Mathematics, University of Chicago, 2009-
Manager, Keynes Fellowship Fund, Cambridge University, 2010-

Past

Member, Board of Directors, Social Science Research Council, 2015-2022
Manager, Cambridge Endowment for Research in Finance, Cambridge University, 2008-2020.
External Professor, Santa Fe Institute, 1988-2002.
Member, Board of Trustees, [Mathematical Sciences Research Institute](#), 2011-2015.
Member, Academic Council, INSPER, 1998-2014
Member, Scientific Board, AXA Research Fund, 2010-2013.
Member, Advisory Panel (Economics), The Sloan Foundation, 1991-1997.
Member, Advisory Committee - Economic Growth and Policy Program, Canadian Institute for Advanced Research, 1993-2002.
Member, Council of the Bachelier Finance Society, 1996-1999.
Member, Advisory Board, Master of Science in Financial Mathematics Program, University of Chicago (Mathematics Department), 1996 - 2000.
Member, Social Equity Forum, Inter-American Development Bank, 1999- 2002
Member, Council of the Econometric Society, 1999-2002.
Member, International Advisory Board, Mathematics of Information Technology and Complex Systems Canadian Network, 2005-2008.
Co-editor, *Journal of Political Economy*, 1983-1994.
Associate Editor, *Journal of Economic Theory*, 1976-1980.
Advisory Editor, *Resources and Energy*, 1976-1992.
Reviewer, *Mathematical Review*, 1976-1979.
Advisory Editor for the series *Applications of Mathematics*, Springer-Verlag, 1991-2001.
Member, Editorial Board, *Ricerche Economiche*, 1993-1998
Member, Editorial Board, *Revista de Econometria*, 1993-1996.
Member, Editorial Board, *Finance and Stochastics*, Springer-Verlag, 1995-2016.
Member, Editorial Committee, *Paris-Princeton Lectures in Mathematical Finance* (Lecture Notes in Mathematics, Springer), 2002-2010

SELECTED LECTURES

Harry Johnson Lecture, Royal Economic Society/Association of University Teachers in Economics, 1989.
Revista Brasileira de Economia Lecture, Latin American Meeting of the Econometric Society, 1993.
Mathematical Economics and Finance, Oberwolfach, 1998.
Director and lecturer, School on the Mathematics of Economics, International Center for Theoretical Physics, 1998, 2000.
Invited Lecture, World Congress of the Econometric Society, 2000.
Wellington-Burnham Lecture, Tufts University, 2001.
Opening Lecture, First Congress of the Brazilian Finance Society, 2001.
"Aula Magna," ANPEC (Brazilian Economic Association) Congress, 2001.
Annales d'Economie et de Statistique Lecture, DELTA, France, 2002.
Plenary lecture, Bachelier Finance Society 4th World Congress, Tokyo, 2006.
Martha & Jonathan Cohen Distinguished Visitor at the Penn Institute for Economic Research, University of Pennsylvania, March 2007.
Berglas Lecture, Eitan Berglas School of Economics, Tel Aviv University, November 2007.
Plenary Lecture, Society for Economic Dynamics Annual Meeting, 2008.
Hurevicz Lecture, Latin American Meeting of the Econometric Society, 2008.
Arrow Lecture, Columbia University, 2010.
Nomura Lecture, Mathematical Institute, Oxford University, 2012.
Plenary Lecture, Bachelier Finance Society 10th World Congress, Dublin, 2018.
Arrow Lecture, Israel Institute for Advanced Studies, 2019.
Inaugural Day Lecture, Institute for Mathematical and Statistical Innovation" (IMSI), 2021.

PUBLICATIONS

Books

General Equilibrium Growth and Trade: Essays in Honor of Lionel McKenzie (co-editor with J. Green), Academic Press, New York, 1979.

Speculation, Trading, and Bubbles, Kenneth J. Arrow Lecture Series, Columbia University Press, New York, 2014. Chinese edition by China CITIC Press, 2016.

Articles

With [W. A. Brock](#), "Some Results on Global Asymptotic Stability of Difference Equations," *Journal of Economic Theory* 10(2), April 1975.

"On Optimal Steady States of n-Sector Growth Models when Utility is Discounted," *Journal of Economic Theory* 12(1), February 1976.

With [W. A. Brock](#), "Global Asymptotic Stability of Optimal Control Systems with Applications to the Theory of Economic Growth," *Journal of Economic Theory* 12(1), February 1976.

With [William A. Brock](#), "Global Asymptotic Stability of Optimal Control with Applications to Dynamic Theory," *Applications of Control Theory to Economic Analysis*, (eds.) J.D.Pitchford and S.Turnovsky, North Holland, 1977: 173-208.

With [Aloisio Araujo](#), "Smoothness, Comparative Dynamics and the Turnpike Property," *Econometrica* 45(3), 1977: 601-620.

With R.W. Jones, "The Relevance of the Two-Sector Production Model in Trade Theory," *Journal of Political Economy* 85(5), February 1977. Reprinted in *The Stolper-Samuelson Theorem: A Golden Jubilee*, A. V. Deardorff and R.M. Stern (eds.), The University of Michigan Press, 1994 and in *The Globalization of the World Economy*, D. Greenway and D. Nelson (eds.) Edward Elgar Publishing, UK, 1998 .

With [William A. Brock](#), "On the Long-Run Behavior of a Competitive Firm," *Equilibrium and Disequilibrium in Economic Theory*, G. Schwodiauer (ed.), D. Riedel Publishing Company, Dordrecht, Holland, 1978.

"Stability of Separable Hamiltonians and Investment Theory," *Review of Economic Studies*, October 1978.

With L.M. Benveniste, "On The Differentiability of the Value Function in Dynamic Models of Economics," *Econometrica* 47(3), May 1979.

With M. P. Magill, "Stability of Regular Equilibria and the Correspondence Principle for Symmetric Variational Problems," *International Economic Review*, 1979.

With [Aloisio Araujo](#), "Notes on Comparative Dynamics," in Green and Scheinkman (eds.) *General Equilibrium Growth and Trade*, Academic Press, 1979.

With [William A. Brock](#), "Some Remarks on Monetary Policy in an Overlapping Generations Model," Kareken and Wallace (eds.) *Models of Monetary Economics*, Federal Reserve Bank of Minneapolis, 1980. "Overlapping Generations Model of Fiat Money--A Comment," in Kareken and Wallace (eds.) *Models of Monetary Economics*, Federal Reserve Bank of Minneapolis, 1980.

With L.M. Benveniste, "Duality Theory for Dynamic Optimization Models of Economics: The Continuous Time Case," *Journal of Economic Theory*, 1982.

With [Aloisio Araujo](#), "Maximum Principle and Transversality Condition for Concave Infinite Horizon Economic Models," *Journal of Economic Theory*, 1983.

With J. Schechtman, "A Simple Competitive Model with Production and Storage," *Review of Economic Studies*, 1983.

With [William A. Brock](#), "Free Entry and the Sustainability of Natural Monopoly: Bertrand Revisited by Cournot," in D. Evans (ed.) *Breaking Up Bell--Essays on Industrial Organization and Regulation*, North Holland Publishers, New York, 1983.

With [D. Kreps](#), "Quantity Pre-Commitment and Bertrand Competition Yield Cournot Outcomes," *Bell Journal of Economics*, 1983. Reprinted in *Microeconomic Theories of Imperfect Competition: Old Problems and New Perspectives*, J. Gabszewicz and J. Thisse (eds.), Edward Elgar Publishing, UK, 1998.

With Charles Kahn, "Optimal Employment Contracts with Bankruptcy Constraints," *Journal of Economic Theory* 35(2), April 1985.

With [William A. Brock](#), "Price Setting Supergames with Capacity Constraints," *Review of Economic Studies* LII(3), July 1985.

With Laurence Weiss, "Borrowing Constraints and Aggregate Economic Activity," *Econometrica* 54(1), January 1986: 23-45.

With Ivar Ekeland, "Transversality Conditions for Some Infinite Horizon Models Arising in Economics," *Mathematics of Operations Research* 11(2), May 1986.

With [James Heckman](#), "The Importance of Bundling in a Gorman-Lancaster Model of Earnings," *Review of Economic Studies* LIV, 1987: 243-255.

With [Michele Boldrin](#), "Learning-By-Doing, International Trade and Growth: A Note," in *The Economy as an Evolving Complex System*, Santa Fe Institute Studies in the Sciences of Complexity, Addison-Wesley Publishing Co., 1988.

"Dynamic General Equilibrium Models - Two Examples," *Lecture Notes in Mathematics*, A. Ambrosetti, F. Gori, and R. Lucchetti, (eds.), Springer-Verlag: Germany 1988.

With J-P. Eckmann, S. Oliffson Kamphorst, and D. Ruelle, "Lyapunov Exponents for Stock Returns," in *The Economy as an Evolving Complex System*, Santa Fe Institute Studies in the Sciences of Complexity, Addison-Wesley Publishing Company, 1988.

"Market Incompleteness and the Equilibrium Valuation of Asset Prices," in *Frontiers of Financial Theory*, S. Bhattacharya and George Constantinides, (eds.), Littlefield and Rowman Publishers, 1989.

With [Blake LeBaron](#), "Nonlinear Dynamics and GNP Data," in *Economic Complexity: Chaos, Sunspots, Bubbles, and Nonlinearity*, William Barnett, John Geweke, and Karl Shell, (eds.), Cambridge University Press, 1989.

With [Blake LeBaron](#), "Nonlinear Dynamics and Stock Returns," *Journal of Business*, July 1989. Reprinted in *Cycles and Chaos in Economic Equilibrium*, edited by Jess Benhabib. Princeton University Press, 1992.

"Nonlinearities in Economic Dynamics," *Economic Journal*, January 1990. Reprinted in *Foundations of Probability, Econometrics and Economic Games*, Hamouda and Rowley, (eds.), Edward Elgar Publishing, Ltd. and in *Discrete and Continuous Systems, Cointegration and Chaos*, Hamouda and Rowley, (eds.), Edward Elgar Publishing, Ltd., 1997.

With Robert Litterman, "Common Factors Affecting Bond Returns," *Journal of Fixed Income*, 1(1), June 1991. Reprinted in *Interest Rate Risk Measurement and Management*, S. Nawalkha and D. Chambers (eds.), II Books, 1999 and in *The Debt Market*, S. Ross (ed.), Edward Elgar Publishing, Ltd., 1999.

With Robert Litterman and Laurence Weiss, "Volatility and the Yield Curve," *Journal of Fixed Income*, 1(1), June 1991. Reprinted in *The Debt Market*, S. Ross (ed.), Edward Elgar Publishing, Ltd., 1999.

"No linealidades en las series economicas: herramientas estadísticas relacionadas con la dinamica no lineal," *Cuadernos Economicos*, 47(1) 1991.

With A. Conze, and J.-M. Lasry, "A System of Non-Linear Functional Differential Equations Arising in an Equilibrium Model of an Economy with Borrowing Constraints," *Annales de l'Institut Henri Poincaré-Analyse non Lineaire*, Vol 8(5). 1991. 523-559.

With Bernard Bensaid, Jean-Philippe Lesne, and Henri Pages, "Derivative Asset Pricing with Transaction Costs," *Mathematical Finance*, Vol 2(2), April 1992. 63-86. Reprinted in *Options Markets*, G. Constantinides and A. Malliaris (eds.) Edward Elgar Publishing, Ltd., 2000.

"Stock Returns and Nonlinear Dynamics," *The New Palgrave Dictionary of Money and Finance*, J. Eatwell et al. (eds.), 1992.

With [Edward Glaeser](#), Hedi Kallal, and [Andrei Shleifer](#), "Growth in Cities," *Journal of Political Economy*, 100(6), December 1992. 1126-52.

With Antoine Conze and Jean-Michel Lasry, "Borrowing Constraints and International Comovements," in *General Equilibrium Growth and Trade II*, R. Becker et. al. (eds.), Academic Press, 1993. Reprinted in *Hitotsubashi Journal of Economics*, Vol. 34, Special Issue, December 1993.

With Per Bak, Kan Chen, and [Michael Woodford](#), "Aggregate Fluctuations from Independent Sectoral Shocks: Self-Organized Criticality in a Model of Production and Inventory Dynamics," *Ricerche Economiche*, 47, 1993. 3-30.

"Nonlinear Dynamics in Economics and Finance," *Transactions of the Royal Society*, 346, 1994, 235-250.

With [Michael Woodford](#), "Self-Organized Criticality and Economic Fluctuations," *American Economic Review* (Papers and Proceedings) 84(2), 417-421, 1994.

With Kevin Murphy and Sherwin Rosen, "Cattle Cycles," *Journal of Political Economy* 102(3), June 1994, 468-492.

"Public Goods and the Environment," in *Environment, Economics and Their Mathematical Models*, J.I. Diaz and J.L. Lions, (eds.), Masson Publishers, Paris, 1994.

With Peter Knez and Robert Litterman, "Explorations into Factors Explaining Money Market Returns," *Journal of Finance* 49(5), 1994, 1861-1882.

With [Lars Hansen](#), "Back to the Future: Generating Moment Implications for Continuous-Time Markov Processes," *Econometrica* 63(4), July 1995, 767-804. Reprinted in *Modelling Stock Market Volatility - Bridging the Gap to Continuous Time*, edited by Peter E. Rossi, Academic Press, 1996.

With [Edward L. Glaeser](#) and [Andrei Shleifer](#), "Economic Growth in a Cross-Section of Cities," *Journal of Monetary Economics*, 36, 117-143, 1995.

With [Edward Glaeser](#), "The Transition to Free Markets: Where to Begin Privatization," *Journal of Comparative Economics* 22, 1996, 23-42.

With [Edward Glaeser](#) and Bruce Sacerdote, "Crime and Social Interactions," *Quarterly Journal of Economics*, May 1996, 507-548.

With [William A. Brock](#), [W.D. Dechert](#), and [B. LeBaron](#), "A Test for Independence Based on the Correlation Dimension," *Econometric Reviews* 15(3), 1996, 197-235.

With Timothy Conley, [Lars Hansen](#), and Erzo Luttmer, "Short-Term Interest Rates as Subordinated Diffusions," *The Review of Financial Studies* 10(3), 1997, 525-577.

With Vicente Madrigal, "Price Crashes, Information Aggregation, and Market-Making," *Journal of Economic Theory* 75(1), July 1997, 16-63.

With [Edward Glaeser](#), "Neither a Borrower Nor a Lender Be: An Economic Analysis of Interest Restrictions and Usury Laws," *Journal of Law and Economics*, April 1998.

With [Lars Hansen](#) and Nizar Touzi, "Spectral Methods for Identifying Scalar Diffusions," *Journal of Econometrics* 86, 1998, 1-32.

With [Edward Glaeser](#), [David Laibson](#), and Christine Soutter, "Measuring Trust," *Quarterly Journal of Economics*, August 2000, 811-846.

With Thaleia Zariphopoulou, "Optimal Environmental Management in the Presence of Irreversibilities," *Journal of Economic Theory* 96, 2001, 180-207

With [Edward Glaeser](#), "Measuring Social Interactions," in *Social Dynamics*, S. Durlauf and P. Young, (eds.), MIT Press, Cambridge, 2001.

With [Tano Santos](#), "Financial Intermediation without Exclusivity," *American Economic Review* (Papers and Proceedings), May 2001, 436-439.

With [Tano Santos](#), "Competition among Exchanges," *Quarterly Journal of Economics*, August 2001, 1027-1062.

With [Edward Glaeser](#), "Non-Market Interactions," in *Advances in Economics and Econometrics: Theory and Applications, Eight World Congress*, M. Dewatripont, L.P. Hansen, and S. Turnovsky (eds.), Cambridge University Press, 2002.

With [Edward Glaeser](#) and [Andrei Shleifer](#) "The Injustice of Inequality," *Journal of Monetary Economics*, January 2003, 199-222.

With [Edward Glaeser](#) and Bruce Sacerdote, "The Social Multiplier," *Journal of the European Economic Association*, April-May 2003.

With [Wei Xiong](#) "Overconfidence and Speculative Bubbles," *Journal of Political Economy*, December 2003, 1183-1219.

With [Wei Xiong](#) "Heterogeneous Beliefs, Speculation and Trading in Financial Markets," *Paris-Princeton Lectures on Mathematical Finance 2003, Lecture Notes in Mathematics* 1847, Springer-Verlag, Berlin, 2004.

With Patrick Bolton and [Wei Xiong](#) "Pay for Short-Term Performance: Executive Compensation in Speculative Markets," *Journal of Corporation Law*, Summer 2005, 721-747.

With Harrison Hong and [Wei Xiong](#) "Asset Float and Speculative Bubbles," *Journal of Finance*, June 2006, 1073-1117.

With Ulrich Horst "Equilibria in Systems of Social Interactions." *Journal of Economic Theory*, 130, 2006, 44-77.

With Patrick Bolton and [Wei Xiong](#) "Executive Compensation and Short-termist Behavior in Speculative Markets" *Review of Economic Studies*, 73, 2006, 577-610.

With L.C. Rogers "Optimal Exercise of American Claims When Markets Are Not Complete," *Finance and Stochastics*, 11, July 2007, 357-372.

"Social Interactions." in *The New Palgrave Dictionary of Economics*, 2nd edition, S. Durlauf and L. Blume (eds.), Palgrave Macmillan, 2008.

With Harrison Hong and [Wei Xiong](#), "Advisors and Asset Prices: A Model of the Origins of Bubbles," *Journal of Financial Economics*, 89, 2008, 268-287.

With Lars Hansen, "Long-Term Risk: An Operator Approach" *Econometrica*, 77, 2009, 177-234.

With Patrick Bolton and Tano Santos, “Market and Public Liquidity”, *American Economic Review* (Papers and Proceedings), 99:2, 2009, 584-599

With Ulrich Horst “A Limit Theorem for Systems of Social Interactions”, *Journal of Mathematical Economics*, 45, 609–623, 2009.

With Jianping Mei and [Wei Xiong](#) “Speculative Trading and Stock Prices: Evidence from Chinese A-B Share Premia”, *Annals of Economics and Finance*, 10-2, 225-255, 2009.

With X. Chen and L. Hansen, “Nonlinear Principal Components and Long-run Implications of Multivariate Diffusions”, *Annals of Statistics*, 37:6B, 4279–4312, 2009.

With Yacine Ait-Sahalia and Lars Hansen, “Operator Methods for Continuous-Time Markov Processes” in *Handbook of Financial Econometrics*, Vol. 1, L. Hansen and Y. Ait-Sahalia (eds), North Holland, 2009.

With Aureo de Paula, “Value Added Taxes, Chain Effects and Informality”, *American Economic Journal: Macroeconomics*, 2(4), 195-221, 2010.

With P. Bolton and T. Santos, “Outside and Inside Liquidity”, *Quarterly Journal of Economics*, 126-1, 259-321, 2011.

With J. Borovicka, L. Hansen and M. Hendricks, “Risk Price Dynamics”, *Journal of Financial Econometrics*, 9(1), 3-65, 2011.

With Aureo de Paula "The Informal Sector: An Equilibrium Model and Some Empirical Evidence from Brazil" *Review of Income and Wealth*, 57(s1), s8-s26, 2011.

With Lars Hansen, “Pricing Growth-Rate Risk”, *Finance and Stochastics*, 16:1, 1-15, 2012.

With Lars Hansen, “Recursive Utility in a Markov Environment with Stochastic Growth”, *Proceedings of the National Academy of Sciences*, 109(30), 11967–11972, 2012.

With Patrick Bolton and Tano Santos “Shadow Finance”, in *Rethinking the Financial Crisis*, A. Blinder, A. Lo and R. Solow (eds.), Russel Sage Foundation, New York, 2012.

With Hyun-Soo Choi and Harrison Hong “Speculating on Home Improvements”, *Journal of Financial Economics* 111(3), 609-624, 2014.

With Henri Berestycki and Regis Monneau: “A Non Local Free Boundary Problem Arising in a Theory of Financial Bubbles”, *Philosophical Transactions of The Royal Society A*, 372(2028), 2014.

With Jaroslav Borovicka and Lars Hansen “Shock Elasticities and Impulse Responses”, *Mathematics and Financial Economics*, 8(4) 333-354, 2014.

With Ing-Haw Cheng and Harrison Hong “Yesterday's Heroes: Compensation and Risk at Financial Firms”, *Journal of Finance*, 70(2), 839-879, 2015.

With Patrick Bolton and Tano Santos “Cream-Skimming in Financial Markets”, *Journal of Finance*, 71(2), 709-736, 2016.

With Jaroslav Borovicka and Lars Hansen “Misspecified Recovery”, *Journal of Finance*, 71(6), 2493-2544, 2016.

With Lars Hansen: “Stochastic Compounding and Uncertain Valuation” in *After the Flood: How the Great Recession Changed Economic Thought*, E. G. Weyl, E. L. Glaeser, and T. Santos (eds.), University of Chicago Press, 2017.

With Henri Berestycki, Cameron Bruggeman and Regis Monneau “Bubbles in assets with finite life” *Mathematics and Financial Economics*, 13(3), 429-458, 2019.

With Marcel Nutz “Shorting in Speculative Markets”, *Journal of Finance*, 75(2), 995-1036, 2020

With Harrison Hong and Andrew Karolyi “Climate Finance”, *Review of Financial Studies*, Volume 33(3), 1011–1023, 2020.

With Patrick Bolton and Tano Santos “Savings Gluts and Financial Fragility”, *Review of Financial Studies*, Volume 34(3), 1408–1444, 2021.

With Julien Pénasse and Luc Renneboog “When a Master Dies: Speculation and Asset Float”, *Review of Financial Studies*, Volume 34 (8), 3840–3879, 2021.

With Y. Achdou, C. Bertucci, J-M. Lasry, P-L. Lions and A. Rostand “A class of short-term models for the oil industry that accounts for speculative storage”, *Finance and Stochastics*, Volume 26 (3), 631-669, 2022.

With Makoto Nirei “Repricing Avalanches”, *Journal of Political Economy*, to appear.