Michael Johannes

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University Education

- Ph.D., M.A., Department of Economics, University of Chicago, 2000 (Ph.D. thesis committee: John Cochrane, Lars Hansen (chair), and Jose Scheinkman).
- B.S. Marquette University, summa cum laude, *Phi Beta Kappa,* 1995.

Academic Appointments

- 2017-present, Ann F. Kaplan Professor of Business, Graduate School of Business, Columbia University.
- 2012-2017, Professor of Finance, Graduate School of Business, Columbia University.
- 2012-present, member and committee member of the Center for Financial and Business Analytics for the Data Science Institute, The Fu Foundation School of Engineering and Applied Science, Columbia University.
- 2007 to 2011, Associate Professor of Finance (with tenure), Graduate School of Business, Columbia University.
- 2005 to 2007, Roger F. Murray Associate Professor of Finance, Graduate School of Business, Columbia University.
- Spring 2006, Visiting Scholar, Graduate School of Business, Stanford University.
- Fall 2005, Visiting Associate Professor of Finance, Kellogg Graduate School of Management, Northwestern University.
- 2004 to 2005, Associate Professor, Graduate School of Business, Columbia University.
- 2000 to 2004, Assistant Professor, Graduate School of Business, Columbia University.

Teaching

- Columbia University, Graduate School of Business:
- Capital Markets, MBA (2001-2005, 2007, 2010, 2018-2019), Executive MBA (2010, 2011, 2013), and Global Executive MBA (2012-2019).
- Models and Methods of Continuous-Time Finance, Ph.D., (2001-2004, 2007-2008).

- Introduction to Continuous-Time Finance, Ph.D. (2019)
- Advanced Derivatives, Ph.D. (2019)
- Computational methods for Bayesian inference, Ph.D., (Fall 2007, 2009-2012).
- Executive education: Complete Course in Professional Risk Management (2007-2012), Eruditus Executive Program in Management (2015-2018), Deutsche Bank Associates Program (2016-2018), AMP Program (2016-2018), and Global Banking Program (2016-2019)
- Northwestern University, Kellogg Graduate School of Management: Derivatives I, MBA (Fall 2005).
- Princeton University, Woodrow Wilson School of Public Policy: A Short Course on Financial Markets: Mortgage and Derivative Markets (2010-2018) and Treasury and Credit Markets (2018).

Publications

Journal Articles

1. The Impact of Jumps in Equity Index Volatility and Returns (with Bjorn Eraker and Nicholas Polson), 2003, *Journal of Finance* 58, 1269-1300.
2. The Economic and Statistical Role of Jumps to Interest Rates, 2004, *Journal of Finance* 59, 227-260. Nominated for the Smith-Breeden prize.
3. Pricing Collateralized Swaps (with Suresh Sundaresan), 2007, *Journal of Finance* 62, 383-410.
4. Model Specification and Risk Premia: Evidence from S&P 500 futures options market (with Mark Broadie and Mike Chernov), 2007, *Journal of Finance* 62**,** 1453-1490.
5. MCMC MLE (with Eric Jacquier and Nick Polson), 2007, *Journal of Econometrics* 137, 615-640.
6. Optimal Filtering of Jump-Diffusions: Extracting Latent States from Asset Prices (with Nicholas Polson and Jon Stroud), 2009, *Review of Financial Studies* 22: 2759 – 2799.
7. Understanding Expected Option Returns (with Mark Broadie and Mike Chernov), 2009, *Review of Financial Studies* 22, 4493 – 4529.
8. Particle Learning and Smoothing, 2010, with Carlos Carvalho, Hedibert Lopes and Nick Polson, *Statistical Science*, 25, 88-106.
9. Particle learning: Simulation-based Bayesian inference, *Bayesian Statistics 9*, 2011, (with Carlos Carvalho, Hedibert Lopes, and Nicholas Polson), 317-360.
10. Sequential Learning, Predictability, and Optimal Portfolio Returns, 2014, with Nick Polson and Arthur Korteweg, *Journal of Finance* 69, 611-644.
11. Bayesian modeling and forecasting of 24 hours high frequency volatility, 2014, with Jon Stroud, *Journal of the American Statistical Association* 109, 1368-1384.
12. Parameter learning in General Equilibrium: The Asset Pricing Implications, 2016, with Pierre Collin-Dufresne and Lars Lochstoer, *American Economic Review* 106 (3), 664-698.
13. Learning about Consumption Dynamics, 2016, with Lars Lochstoer and Ethan Mou, forthcoming, *Journal of Finance* 71, 551-600.

14. Asset pricing when "This Time is Different," 2017, with Pierre Collin-Dufresne and Lars Lochstoer, *Review of Financial Studies*, 30, 505-538.
15. Option pricing of Earnings Announcement Risk, 2019, with Andrew Dubinsky, Andreas Kaeck, and Norman Seeger, 32, 646-687, *Review of Financial Studies.*

Book manuscript

- *Computational Methods for Bayesian Inference: MCMC methods and Particle Filtering*, with Nicholas Polson.

Book Chapters

- MCMC methods for Financial Econometrics (with Nick Polson), in *Handbook of Financial Econometrics,* edited by Y. Aït-Sahalia and L.P. Hansen, 2009, Volume 2, 1-72, North Holland.
- MCMC methods for financial time series, (with Nick Polson), in *Handbook of Financial Time Series*, Springer Verlag, edited by Torben G. Andersen, Richard A. Davis, Jens-Peter Kreiss, and Thomas Mikosch, 2009, 1001-1014, Springer-Verlag.
- Particle filtering, (with Nick Polson), *Handbook of Financial Time Series*, Springer Verlag, edited by Torben G. Andersen, Richard A. Davis, Jens-Peter Kreiss, and Thomas Mikosch, 2009, 1015-1031, Springer-Verlag.
- Bayesian computation in finance, (with Hore, Lopes, McCulloch and Polson) in *Frontiers of Statistical Decision Making and Bayesian Analysis*, edited by Chen, M.-H., Dey, D., Mueller, P., Sun, D. and Ye, K., 2010, 383-396.

Invited Comments

- Comment on Pastorello, Patilea and Renault, 'Iterative and Recursive Estimation in Structural Nonadaptive Models,' with Nick Polson, Journal of Business & Economic Statistics 21, 449-509.
- Comment on Doucet et al. "Particle MCMC" (with Nick Polson and Seung Yae), 2010, Journal of Royal Statistical Society, Series B, 72, 324-326.

Working Papers and Work in Progress

- MCMC methods for Expected Utility Calculations, 2011, with Nick Polson and Eric Jacquier.
- Robust state filtering and parameter learning, 2009, with Nick Polson and Seung Yae.
- Exact state filtering parameter learning with particle methods, 2009, with Nick Polson.
- Shocks to asset pricing factors: understanding the risks and realized returns of common asset pricing factors, 2008, with Sam Cheung, Arthur Korteweg, and Nicholas Polson.
- Earnings announcement risk and earnings surprises, 2019, with Andreas Kaeck and Norman Seeger.
- Option based information about post earnings announcement drift, with Andreas Kaeck and Norman Seeger, 2018.

Conference and Seminar Presentations

- Research seminars:
  - Brigham Young University (2014)
  - Carnegie Mellon (GSIA, 2003)
  - Caspian Capital Management (2004)
  - Chicago Quantitative Alliance (2012)
  - Citigroup Fixed Income Research (2004)
  - Columbia (Economics, 2013)
  - Columbia University (GSB, 2000, numerous as faculty member)
  - Duke University (Fuqua, 1999)
  - EPFL/University of Lausanne (2013)
  - Federal Reserve Board of Governors (2000)
  - Federal Reserve Bank of New York (2006, 2009, 2018)
  - Federal Reserve (San Francisco, 2013)
  - Goldman, Sachs Asset Management (2005, 2007)
  - Harvard University (Economics, 2008)
  - Institute for Financial Research in Stockholm (2011)
  - Northwestern University (Kellogg, 2000, 2003, 2005)
  - Lehman Brothers Fixed Income Research (2002)
  - London Business School (2002)
  - London School of Economics (2002)
  - McGill University (2008)
  - MIT (Sloan, 2005)
  - Morgan Stanley Fixed Income Research (2003)
  - NYU (Stern, 2001)
  - Oxford University (GSB, 2008)
  - Rice University (2009)
  - Stanford University (GSB, 2003, 2006, 2011)
  - UCLA (Anderson School, 2013)
  - University of Amsterdam/Duisenberg School of Finance/Tinbergen Institute (2012)
  - University of California-Berkeley (GSB, 2003)
  - University of Chicago (GSB, 1999, 2008)
  - University of Houston (2015)
  - University of Illinois Champagne/Urbana (2004, 2008)
  - University of Minnesota (GSB, 2006)
  - University of Montreal (2000)
  - University of Pennsylvania (Economics, 2005)

  - University of Southern California (2004)
  - University of Texas at Austin (McCombs, 2003, 2009)
  - University of Wisconsin (2011)
  - Washington University in St. Louis (GSB, 2005)
  - Yale University (SOM, 2007)

- Conference presentations/discussions:
  - 14th Australasia Finance Conference (Keynote speaker, 2001)
  - American Finance Association (2008 (2), discussant, 2001, 2004, 2006, 2008, 2009)
  - Bank of Canada Fixed Income Conference (discussant, 2006)
  - Canadian Derivatives Institute (2013, 2019 (discussant))
  - Cirano Conference on Financial Econometrics (2000, 2003, 2009, discussant 2006, 2007)
  - Cirano Conference on Monte Carlo Methods (2003)
  - Columbia Financial Engineering Workshop on Market Liquidity (2008),
  - Conference on Derivatives Securities and Risk, Center for Applied Probability of Columbia University (2000)
  - Conference on Financial Innovation: 35 Years of Black/Scholes and Merton (2008),
  - Econometric Society Meetings (1999, 2000, 2007; discussant 2003, 2006)
  - European Finance Association (2013 discussant, 2010, 2013)
  - “Event Risk” Conference Mathematical Science Research Institute (2002)
  - GAIM 2007 Hedge Fund Conference (presenter, panelist)
  - IFSID & Bank of Canada Conference on Derivatives (Keynote Address, 2013)
  - International Association of Financial Engineers Liquidity Buffers Conference (2007)
  - London Oxford Financial Econometrics Conference (2008)
  - Managed Futures Association (2013, panelist)
  - NBER Asset Pricing Group (2002, 2006; discussant in 1999)
  - NBER Commodities Group (discussant, 2015)
  - Princeton Conference on Financial Econometrics (2001)
  - SBIES (Bayesian Inference in Econometrics and Statistics) Conference (2008)
  - SoFiE Conference (2009)
  - Society of Quantitative Analysts (2009)
  - Western Finance Association (2001, 2002, 2003, 2005; Discussant, 2004)

Ph.D. Students With Significant Advisory Role

- Andrew Chen.
- Kodjo Apedjinou (First placement, Lehman Brothers).
- Andrew Dubinsky (Goldman, Sachs).
- Philippe Mueller (LSE)
- Sam Cheung (Deutsche Bank)

- Andreas Stathopoulos (USC)
- Yael Eisenthal (Goldman, Sachs Asset Management)
- Ethan Mou (Merrill Lynch)
- Damla Gunes (Morgan Stanley)
- Ravi Sastry (SMU)
- Alexey Semenov (industry).
- Miguel Morin (Cambridge University).
- Kerem Tuzcuoglu (Bank of Canada)

Awards and Honors

- EMBA-Global Americas & Europe Class of 2013 Commitment to Excellence award.
- 2011 Columbia Business School Dean's Award for Teaching Excellence (in an elective course).
- Nominated for the Smith-Breeden best-paper prize, *Journal of Finance,* 2004.
- Pricing Collateralized Swaps (with Suresh Sundaresan), 2007, *Journal of Finance,* was awarded the "Best Academic Paper of the Year Award" at GAIM (Global Alternative Investment Managers) annual conference, 2007.
- External grant for fixed income and derivatives research ($150,000, anonymous hedge fund).
- Chazen Fellowship, 2001.
- Center for International Business Education research grant, 2001.

Profession service and refereeing

- Referee for the following journals: *Computational Statistics and Data Analysis*, *Econometrica, Finance and Stochastics, Financial Analysts Journal, Finance Research Letters, Journal of Business and Economic Statistics, Journal of Computational Finance, Journal of Economic Dynamics and Control, Journal of Empirical Finance, Journal of Finance, Journal of Financial and Quantitative Analysis, Journal of Financial Econometrics, Journal of Financial Economics, Journal of Political Economy, Journal of Econometrics, Journal of Economic Theory, Journal of Monetary Economics, Journal of the American Statistical Association, Journal of the Royal Statistical Association, Series B, Management Science, Review of Asset Pricing Studies, Review of Economic Studies, Review of Economics and Statistics, Review of Financial Studies, Quantitative Finance, The Quarterly Journal of Economics*, Social Sciences and Humanities Research Council of Canada, and The National Science Foundation.
- Associate Editor: Journal of Econometrics (2016-2018), *Journal of Financial Econometrics* (2007-2012), *Management Science* (2007-2014), *Journal of Business and Economic Statistics (*2009-2013*).*
- Program Committees: Western Finance Association Meeting (2007-2013), American Finance Association (2009, 2010), European Finance Association (2013).
- Member, Research Subcommittee of PRMIA, the Professional Risk Managers International Association, 2011-2103.

<u>School and University service</u>

- Masters in Financial Economics, Program Director, 2011-.
- Faculty Governance Review Committee, Chair, 2017-2018.
- Finance Division Recruiting committee: 2001-2002, 2002-2003, 2003-2004, 2007-2008.
- Finance curriculum committee, Chair, 2010-2011.
- Finance seminar organizer: 2001-2002, 2004-2005.
- Capital Markets Course Coordinator: 2011- 2014
- Member, Financial Analytics Committee, Institute for Data Sciences and Engineering, Fu Foundation School of Engineering, Columbia University: 2012-.
- MBA Conduct committee: 2003-2004.
- MBA Symposium, 2002, "Alternative Perspectives on Wall Street," organizer.
- Student-Faculty Academic Affairs Committee, 2002-2004.
- University Senate: 2004-2006.
- University Ad-hoc tenure review committee, 2008.

<u>Outside activities over the past 10 years</u> (Disclosed in accordance with Columbia Business School policies)

- Consultant to Caspian Capital Management, Markit, O'Brien International, Clarke Capital Management, OBIG, PriceWaterhouseCoopers and various confidential engagement (law firms and expert consulting work)
- CLSA (speaking engagement).
- Member, Standard and Poor's Academic Advisory Council, 2013.