CURRICULUM VITAE

PER ASLAK MYKLAND

January 2018

Department of Statistics	mykland@pascal.uchicago.edu
University of Chicago	http://galton.uchicago.edu/∼mykland/
5747 Elllis Avenue	phone: + 1 (773) 702 8044/8333
Chicago, IL 60637	fax: + 1 (773) 702 9810
USA	

EDUCATION

Ph.D.	University of California, Berkeley, 1989 (Statistics)
M.Sc. (Cand.Scient.)	University of Bergen (Norway), 1984 (Statistics)
B.Sc. (Cand.Mag.)	University of Bergen (Norway), 1983 (Mathematics/Computer Science)
Baccalauréat	Lycée Corneille, Rouen (France), 1979 (série C)

EMPLOYMENT

University of Chicago, from 10/2009	Robert Maynard Hutchins Distinguished Service Professor of Statistics and Finance
University of Chicago, from 1/2009	Director (prev. Scientific Director), Stevanovich Center for Financial Mathematics
University of Oslo (Norway), 2016-2017	Visiting Professor, Department of Statistics
University of Oxford, 2009-2010	Man Professor of Finance and Statistics
University of Oxford, 2009-2014	Fellow of Nuffield College
University of Chicago, from 7/2000	Professor, Department of Statistics
Princeton University, 8/2000-6/2001	Visiting Professor, Dept of Economics and ORFE, and Bendheim Center for Finance
University of Chicago, 7/1996-6/2000	Associate Professor, Department of Statistics
University of Chicago, 7/1989-6/1996	Assistant Professor, Department of Statistics
Norwegian Petroleum Directorate, 3/1984-8/1984	Statistical consultant
Chr. Michelsen's Institute, Bergen, 8/1982-6/1983	Research worker (part time)

STUDENTS, TEACHING, AND INVITED LECTURES

Students Supervised

Ph.D. degree: 16 completed, 2 in process

For a full list, with titles and current affiliations, see Appendix A

Master of Science and Master of Arts degrees: 29 completed

Bachelor's degree: 6 completed

Teaching

Ranging from undergraduate to specialized graduate courses

For a full list, see http://www.stat.uchicago.edu/∼mykland/courses.html

Invited Lectures

More than 200 invited lectures

For a full list, see Appendix B

ACADEMIC SERVICE AND HONORS (OUTSIDE THE UNIVERSITY OF CHICAGO)

Honors

Elected Fellow, American Statistical Association, since 1999

Elected Fellow, Institute of Mathematical Statistics, since 1999

Medallion Lecture, Institute of Mathematical Statistics, Banff, 2002

Elected Fellow, Society of Financial Econometrics, since 2012

Society for Financial Econometrics (SoFiE)

SoFiE Council (since 2009)

President of SoFiE July 2017 - June 2019

Institute of Mathematical Statistics

IMS Council (2001-2005)

IMS Fellowship Committee (2002-2005)

IMS Investment Committee (2004-2008)

National Science Foundation

Review Panels of the National Science Foundation (most recently 2016)

University of Oxford

Advisory Board of the Oxford-Man Institute (2009-11)

Executive Committee, and Research Committee, Oxford-Man Institute (2009-10)

Associate Member, Oxford-Man Institute (since 2010)

Rutgers University

Advisory Committee, Program on Financial Statistics and Risk Management (since 2009, program launched 2011)

Humboldt-Universität zu Berlin, Xiamen University, Freie Universität Berlin, Weierstrass Institute for Applied Analysis and Stochastics

Advisory Board for The International Research Training Group (IRTG) on High Dimensional Non Stationary Time Series (since 2013)

The European Intraday Financial Database (Equipex BEDOFIH)

Member of the Scientific Committee (since 2012)

Editorial activity

Associate editor of the following journals: *Journal of the American Statistical Association* (since 2010), *Journal of Financial Econometrics* (since 2009), *Annals of Statistics* (2004-2012), *Annals of Applied Statistics* (2009-2012), *Statistics Surveys* (2008-2012), *Journal of Business and Economic Statistics* (2012-2015), *Journal of the Royal Statistical Society Series B* (2007-2009), *Econometrics Journal* (2008-2016), *Electronic Journal of Statistics* (2007-2010), *Scandinavian Journal of Statistics* (1997-2001)

Co-editor (with Nour Meddahi, and Neil Shephard) of special volume of the *Journal of Econometrics* on Realized Volatility, which appeared in 2011

Co-editor (with Rainer Dahlhaus, Jean Jacod, and Nakahiro Yoshida) of special volume of *Stochastic Processes and Their Applications*, which appeared in 2013

Co-editor (with Rong Chen and Qiwei Yao) of special volume of the *Journal of Econometrics* on Financial Statistics and Risk Management (in process)

Co-editor (with Francis X. Diebold, Eric Ghysels, and Lan Zhang) of special volume of the *Journal of Econometrics* on Big Data in Dynamic Predictive Econometric Modeling (in process)

Editorial Board, Springer Series in Operations Research and Financial Engineering (since ca 2008)

Organized Summer Schools

Financial Econometrics Summer School, University of Chicago and SoFiE, Chicago (July 2018) on "Machine Learning and Finance: The New Empirical Asset Pricing". Instructors: Bryan T. Kelly (Yale University and University of Chicago) and Dacheng Xiu (University of Chicago). Organizer: Per Mykland

Financial Econometrics Summer School, New York University and SoFiE, Shanghai (August 2018) on high frequency finance. Instructors: Yacine Aït-Sahalia (Princeton) and Per Mykland. Organizers: Xin Zhou (New York University, Shanghai) and Per Mykland

Organized Conferences

The econometrics of high frequency financial data, co-organized with Yacine Aït-Sahalia, Bonita Springs, Florida, June 2005

Realized volatility, with Nour Meddahi and Neil Shephard, Montreal, April 2006

Volatility and high frequency data, with Lan Zhang, Chicago, April 2007

Workshop on finance and statistics, Chicago, April 2008

Financial econometrics and statistics: Current themes and new directions, joint conference Stevanovich Center – Center for Research in Econometric Analysis of Time Series (CREATES), Skagen, Denmark, June 2009, co-organizer

Liquidity, credit risk, and extreme events, joint conference Stevanovich Center – Society for Financial Econometrics, Chicago, October 2009, co-organizer

Workshop on Financial Econometrics at the Fields Institute, April 2010, co-organizer

RMI Risk Management Conference, National University of Singapore, July 2010, member of program committee

Conference on High frequency data and high frequency trading, Chicago, May 2013, with Roger Lee and Lan Zhang

Conference on Financial Statistics, Chicago, September 2014, with Wei Biao Wu

Conference on Econometrics of High-Dimensional Risk Networks, Chicago, October 2016, with Francis X. Diebold (University of Pennsylvania), Eric Ghysels (University of North Carolina, Chapel Hill), and Lan Zhang (UIC)

Co-organizer, European Finance Association Annual Meeting, Oslo, August 2016, Track chair for financial econometrics

Conference on "Banking and Financial Crises - Lessons from History", Chicago, December 2016, with Ben Chabot and Francois Velde (Federal Reserve Bank of Chicago), and Eric Ghysels (University of North Carolina, Chapel Hill). The conference was joint between the Stevanovich Center, The University of Chicago, and the Federal Reserve Bank of Chicago

Conference on Big Data in Dynamic Predictive Econometric Modeling, Philadelphia, May 2017, with Francis X. Diebold, Eric Ghysels, and Lan Zhang

Conference on New Aspects on Statistics, Financial Econometrics, and Data Science, Chicago, May 2018, with Tracy Z. Ke (main organizer), Francis X. Diebold, Eric Ghysels, and Lan Zhang

Organized Recurring Conferences

Conference on Market Microstructure and High Frequency Data, Chicago, May 2014, 2015, 2016, June 2017, May 2018, with Roger Lee and Lan Zhang

Financial Engineering and Risk Management (FERM), member of organizing committee in 2005 (Shanghai), 2006 (Xiamen), 2007 (Beijing), 2008 (Shanghai), 2010 (Taipei), 2012 (Hunan University), 2014 (Beijing), 2016 (Guangzhou), 2018 (Beijing)

Annual meeting of Society of Financial Econometrics, member of program committee 2011 (Chicago), 2012 (Oxford), 2013 (Singapore), 2014 (Toronto), 2015 (Aarhus), 2016 (Hong Kong), 2017 (New York), 2018 (Lugano), 2019 (Beijing); also local organizer in Chicago in 2011

GRANTS AND FELLOWSHIPS

Source — **Duration**
Grant Title

U.S. National Science Foundation grant DMS 17-13129 — 2017-2020
"Statistical inference for high frequency data"

U.S. National Science Foundation grant DMS 14-07812 — 2014-2017
"Better efficiency, better forecasting, better accuracy: A new light on the dependence structure in high frequency data"

U.S. National Science Foundation grant SES 11-24526 — 2011-2014
"Statistical Inference for High Frequency Data"

U.S. National Science Foundation grant DMS 06-04758 — 2006-2011
"Statistical Inference for High Frequency Data"

U.S. National Science Foundation grant SES 06-31605 — 2006-2009
"Inference and Ill-Posedness for Financial Hig Frequency Data"

U.S. National Science Foundation grant DMS 02-04639 — 2002-2007
"Is Deliberate Misspecification Desirable? A Statistical Study of Financial and other Time-Dependent Data"

U.S. National Science Foundation grant DMS 99-71738 — 1999-2002
"Statistics and Finance"

U.S. National Science Foundation grant DMS 96-26266 — 1996-1999
"Artificial and Approximate Likelihoods"

U.S. National Science Foundation grant DMS 93-05601 — 1993-1996
"Expansion and Likelihood Methods for Martingales and Martingale Inference"

U.S. National Science Foundation grant DMS 92-04504 — 1992-1993
"Statistical Inference from General Models" (co-Principal Investigator)

U.S. National Science Foundation grant DMS 89-02667 — 1990-1992
"Statistical Inference from General Models" (co-Principal Investigator)

U.S. Army Research Office grant DAAH049510105 — 1995-1999
"Expansion and Likelihood Methods for Martingales and Martingale Inference".

Norwegian General Research Council grant — 1984-1988
research at the University of Bergen 11/84-12/85, study at Berkeley 1/86-12/88

Regent's fellowship from University of California at Berkeley — 1986-1988

Meltzer's fellowship from University of Bergen — 1982-1984

ACADEMIC SERVICE AT THE UNIVERSITY OF CHICAGO

Department of Statistics, University of Chicago:

Joint chairman of the consulting program (1989-1991)

Department Counselor (1995-1999) (department advisor, assignment of courses to faculty and students, management of the program)

Department graduate advisor (1999-2000, 2007-2009, and 2010-2012)

Admissions committee (1992-1995, 2002-2003)

Teaching committee, then Curriculum Chair, the Chair of Teaching committee (2003-2009, and from 2010)

Misc. ad hoc committees

(continued on next page)

Financial Mathematics and Econometrics, and Stevanovich Center, University of Chicago:

Joint organizer (with Yacine Aït-Sahalia) of the Financial Engineering Workshop (Business School/Statistics/MathFinance) (1997-2000)

Organizer of the Financial Mathematics Visiting Scholar Program (since 2001)

Joint organizer of the Financial Mathematics Workshop (since 2001)

Financial Mathematics admissions committee (2003-2007, and 2011-2012)

Scentific Committee of the Stevanovich Center for Financial Mathematics (2006-2009)

Governing Board of the Stevanovich Center for Financial Mathematics (since 2009)

Scientific Director, then Director, Stevanovich Center for Financial Mathematics (since 2009)

Curriculum Committee, Program for Financial Mathematics (since 2012)

College, Divisions, University of Chicago:

Physical Sciences Division governing committee (1992-1998)

College Council (1995-1998, and 2004-2007)

Council of the Academic Senate (2005-2008)

College Curriculum Committee (2006-2008)

Misc. ad hoc committees

BIBLIOGRAPHY

PER ASLAK MYKLAND

January 2018

Most papers are available on the Internet at http://galton.uchicago.edu/~mykland/publ.html

For google scholar citation counts, see http://scholar.google.com/citations?user=Ic4pPAYAAAAJ

Published or to appear

Mykland, P.A. (1991). Consulting as a part of statistical education - some experiences from Chicago (in Norwegian), *Tilfeldig Gang* **8** no. 2, 26-28 (*Tilfeldig Gang* is the Bulletin of the Norwegian Statist. Assoc.).

Mykland, P.A. (1992). Asymptotic expansions and bootstrapping-distributions for dependent variables: a martingale approach. *Ann. Statist.* **20** 623–654.

Mykland, P.A. (1993). Asymptotic expansions for martingales. *Ann. Probab.* **21** 800–818.

Chaudhuri, P., and Mykland, P.A. (1993). Nonlinear experiments; optimal design and inference based on likelihood, *J. Amer. Statist. Assoc.* **88** 538-546.

Mykland, P.A. (1994). Bartlett type identities for martingales. *Ann. Statist.* **22** 21–38.

Mykland, P.A., Tierney, L., and Yu, B. (1995). Regeneration in Markov chain samplers, *J. Amer. Statist. Assoc.* **90** 233-241.

Mykland, P.A. (1995). Dual likelihood. *Ann. Statist.* **23** 396–421.

Mykland, P.A. (1995). Martingale Expansions and Second Order Inference. *Ann. Statist.* **23** 707–731.

Chaudhuri, P., and Mykland, P.A. (1995). On efficient designing of nonlinear experiments, *Statistica Sinica* **5** 421-440.

Mykland, P.A. (1995). Embedding and asymptotic expansions for martingales, *Probab. Theory Rel. Fields* **103** 475-492.

Mykland, P. A., and Ren, J.-J. (1996). Algorithms for computing self-consistent and maximum likelihood estimators with doubly censored data, *Ann. Statist.* **24** 1740-1764.

Mykland, P.A. (1997). Likelihood from estimating functions, *The Selected Proceedings of the Symposium on Estimating Functions*, Basawa, I.V., Godambe, V.P., and Taylor, R.L. (eds.). *IMS Lect. Notes. – Monograph series* **32**), 57-61.

Yu, B., and Mykland, P. A. (1998). Looking at Markov samplers through cusum path plots: a simple diagnostic idea, *Statistics and Computing* **8** 275-286.

Lazar, N., and Mykland, P. A. (1998). An evaluation of the power and conditionality properties of empirical likelihood, *Biometrika* **85** 523-534.

Lazar, N., and Mykland, P. A. (1999). Empirical likelihood in the presence of nuisance parameters, *Biometrika* **86** 203-211.

Mykland, P.A. (1999). Bartlett identities and large deviations in likelihood theory, *Ann. Statist.* **27** 1105-1117.

Mykland, P.A. (1999). Trading strategies under statistical uncertainty: An approach based on a single prediction interval, in *The proceedings of the 1999 NBER/NSF time series conference*, Academia Sinica, Taipei.

Mykland, P.A. (2000). Conservative delta hedging *Ann. Appl. Probab.* **10** 664–683.

Mykland, P.A. (2001). Likelihood computations without Bartlett identities, *Bernoulli* **7** 473–485.

Aït-Sahalia, Y., and Mykland, P.A. (2003). The effects of random and discrete sampling when estimating continuous-time diffusions, *Econometrica* **71** 483–549.

Mykland, P.A. (2003). The interpolation of options, *Finance and Stochastics* **7** 417-432.

Mykland, P.A. (2003). Financial options and statistical prediction intervals, *Ann. Statist.* **31** 1413-1438.

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Aït-Sahalia, Y., and Mykland, P.A. (2004). Estimators of diffusions with discrete observations: a general theory, *Ann. Statist.* **32** 2186-2222.

Aït-Sahalia, Y., Mykland, P.A., and Zhang, L. (2005). How often to sample a continuous-time process in the presence of market microstructure noise, *Review of Financial Studies* **18** 351-416.

Hayashi, T., and Mykland, P.A. (2005). Evaluating Hedging Errors: An Asymptotic Approach, *Math. Finance* **15** 309-343.

Zhang, L., Mykland, P.A., and Aït-Sahalia, Y. (2005). A tale of two time scales: Determining integrated volatility with noisy high-frequency data, *J. Amer. Statist. Assoc.* **100** 1394-1411.

Mykland, P.A., and Zhang, L. (2006). ANOVA for diffusions and Itô processes. *Ann. Statist.* **34** 1931-1963.

Song, S., and Mykland, P.A. (2006). An Asymptotic Decomposition of Hedging Errors. *Journal of the Korean Statistical Society* **35** 115-142.

Li, Y., and Mykland, P.A. (2007). Are volatility estimators robust with respect to modeling assumptions? *Bernoulli* **13** 601-622.

Lee, S., and Mykland, P.A. (2008). Jumps in financial markets: A new nonparametric test and jump clustering. *Review of Financial Studies* **21** 2535-2563.

Aït-Sahalia, Y., and Mykland, P.A. (2008). An analysis of the Hansen-Scheinkman method of moments estimators for discretely and randomly sampled diffusions. *Journal of Econometrics* **144** 1-26.

Mykland, P.A., and Zhang, L. (2008). Inference for volatility-type objects and implications for hedging, *Statistics and Its Interface* **1** 255-278.

Jacod, J., Li, Y., Mykland, P.A., Podolskij, M., and Vetter, M. (2009). Microstructure noise in the continuous case: The pre-averaging approach, *Stochastic Processes and their Applications* **119** 2249-2276.

Aït-Sahalia, Y., and Mykland, P.A. (2009). Estimating Volatility in the Presence of Market Microstructure Noise: A Review of the Theory and Practical Considerations, in: *Handbook of Financial Time Series* (T. Andersen, R. Davis, J.-P. Kreiss, and Th. Mikosch, eds), 577-598. (Springer-Verlag, Berlin.)

Mykland, P.A., and Zhang, L. (2009). Inference for Continuous Semimartingales Observed at High Frequency, *Econometrica* **77 (5)** 1403-1455.

Mykland, P.A. (2010). Options pricing bounds and statistical uncertainty. in: *Handbook of Financial Econometrics* (Y. Aït-Sahalia and L.P. Hansen, eds.), Chapter 15 (Vol II p 135-196). (North Holland, Amsterdam.)

Lin, Ming, Chen, Rong, and Mykland, P. A. (2010). On generating Monte Carlo samples of continuous diffusion bridges, *Journal of the American Statistical Association* **105** 820-838.

Aït-Sahalia, Y., Mykland, P.A., and Zhang, L. (2011). Ultra high frequency volatility estimation with dependent microstructure noise, *Journal of Econometrics* **160** 160-165.

Zhang, L., Mykland, P.A., and Aït-Sahalia, Y. (2011). Edgeworth expansions for realized volatility and related estimators, *Journal of Econometrics* **160** 190-203.

Mykland, P.A., and Zhang, L. (2011), The Double Gaussian Approximation for High Frequency Data, *Scandinavian Journal of Statistics* **38** 215-236.

Jing, Bing-Yi; Kong, Xin-Bing; Liu, Zhi; and Mykland, Per (2012). On the jump activity index for semimartingales, *Journal of Econometrics* **166** 213-223.

Lee, S., and Mykland, P.A. (2012). Jumps in equilibrium prices and market microstructure noise, *Journal of Econometrics*, **168** 396-406.

Mykland, P.A., and Zhang, L. (2012). The econometrics of high frequency data, in *Statistical Methods for Stochastic Differential Equations*, M. Kessler, A. Lindner, and M. Sørensen, eds. (Chapman & Hall/CRC Press), p. 109-190.

Mykland, P.A. (2012). A Gaussian calculus for inference from high frequency data, *Annals of Finance* **8** 235-258.

Wang, Christina D., and Mykland, P.A. (2014). The Estimation of Leverage Effect with High Frequency Data, *Journal of the American Statistical Association* **109** 197-215.

(continued on next page)

Li, Y., Mykland, P.A., Renault, E., Zhang, L., and Zheng, X. (2014). Realized volatility when sampling times are possibly endogenous, *Econometric Theory* **30(03)** 580-605.

Li, Y., and Mykland, P.A. (2015). Rounding errors and volatility estimation. *Journal of Financial Econometrics* **13(2)** 478-504.

Jacod, J., and Mykland, P.A. (2015). Microstructure Noise in the Continuous Case: Approximate Efficiency of the Adaptive Pre-Averaging Method. *Stochastic Processes and their Applications* **125(8)** 2910-2936.

Mykland, P. A., and Ye, J. (2016). Cumulants and Bartlett identities in Cox regression, in *The Fascination of Probability, Statistics, and their Applications: In Honor of Ole E. Barndorff-Nielsen*, Mark Podolskij, Robert Stelzer, Steen Thorbjørnsen, Almut E.D. Veraart, eds., p. 85-97. (Springer-Verlag.)

Mykland, P.A., and Zhang, L. (2016). Between Data Cleaning and Inference: Pre-Averaging and Robust Estimators of the Efficient Price. *Journal of Econometrics*, **194(2)** 242-262.

Bibinger, M., and Mykland, P.A. (2016). Inference for Multi-Dimensional High-Frequency Data with an Application to Conditional Independence Testing. *Scandinavian Journal of Statistics* **43(4)** 1078-1102.

Mykland, P.A., and Zhang, L. (2017). Assessment of Uncertainty in High Frequency Data: The Observed Asymptotic Variance, *Econometrica* **85(1)** 197-231. (See also Web supplement.) doi:10.3982/ECTA12501

Potiron, Y. and Mykland, P.A. (2017). Estimation of Integrated Quadratic Covariation with Endogenous Sampling Times, *Journal of Econometrics* **197(1)** 20-41.

Chen, R.Y., and Mykland, P.A. (2017). Model-free Approaches to discern Non-Stationary Market Microstructure Noise and Time-Varying Liquidity in High Frequency Data, *Journal of Econometrics* **200(1)** 79-103.

Discussions

Mykland, P.A., and Zhang, L. (2005). Discussion of paper "A selective overview of nonparametric methods in financial econometrics" by Jianqing Fan, *Statistical Science* **20** 347-350.

Aït-Sahalia, Y., Mykland, P.A., and Zhang, L. (2006). Comment of "Realized variance and market microstructure noise" by Peter Hansen and Asger Lunde *J. Bus. Econ. Statist.* **24** 162-167.

Submitted, in Revision, etc

Ghysels, E., Mykland, P.A., Renault, E. (2010). In-sample asymptotics and across-sample efficiency gains for high frequency data statistics (in revision for *Econometric Theory*).

Mykland, P.A., Zhang, L., and Chen, D. (2016). The Algebra of Two Scales Estimation, and the S-TSRV: High Frequency Estimation that is Robust to Sampling Times (conditionally accepted by *Journal of Econometrics*).

Wang, Christina D., Mykland, P.A., and Zhang, L. (2017). Estimating and Forecasting Volatility using Leverage Effect. (Submitted.)

Chen, D., Mykland, P.A., and Zhang, L. (2018). The Five Trolls under the Bridge: Principal Component Analysis with Asynchronous and Noisy High Frequency Data. (Submitted.)

Working Papers (new or under reconfiguration)

Mykland, P.A. (2005). Combining statistical intervals and market prices: The worst case state price distribution, TR 553, Department of Statistics, The University of Chicago.

Mykland, P.A., Shephard, Neil, and Sheppard, Kevin (2012). Efficient and feasible inference for the components of financial variation using blocked multipower variation.

Mykland, P.A., and Zhang, L. (2017). Superblocks of Pre-Averaged Data: First Aid for Micrsoctructure, and a Path to Efficiency.

Hansen, L.P., Hansen, P., and Mykland, P.A. (2017). Measuring Belief Distortions: An Information-Theoretic Approach.

(continued on next page)

Master and PhD Theses

Mykland, P. A. (1984). *Causality in stochastic processes* (Master's thesis, University of Bergen, Norway).

Mykland, P. A. (1989). *Edgeworth and bootstrap methods for dependent variables* (Ph. D. thesis, University of California, Berkeley).

Technical Reports (that remain unpublished but have results of some interest)

Mykland, P. A. (1986). Statistical causality, Statistical report no. 14, Dept. of Mathematics, University of Bergen (accepted by *Econometrica* subject to changes in 1988, but let lapse by author). (Posted on my publications web page http://galton.uchicago.edu/∼mykland/publ.html).

Mykland, P. A. (1986). Stable subspaces over regular solutions of martingale problems, Statistical report no. 15, Dept. of Mathematics, University of Bergen. (Posted on my publications web page.)

Mykland, P.A. (1994). Nonparametric and dual likelihood in survival analysis, Technical report no. 395, Dept. of Statistics, University of Chicago. (Posted on my publications web page.)

Chan, S.-K., and Mykland, P. A. (1994). On first order asymptotic expansions for martingales, Technical report no. 88, Dept. of Biostatistics, University of Wisconsin, Madison.

Mykland, P.A. (1996/98). Options pricing and statistical uncertainty, Technical report no. 430, Department of Statistics, University of Chicago.

Mostly Superseded (published in other and better form)

Mykland, P.A. (1991). On second order asymptotic expansions for martingales, Technical report no. 322, Dept. of Statistics, University of Chicago (about 75% overlap with TR 364 below).

Mykland, P.A. (1993). Second order asymptotic expansions for martingales, Technical report no. 364, Dept. of Statistics, University of Chicago. (Essentials published in sect. 5-6 of 'Embedding and asymptotic expansions for martingales').

Mykland, P.A. (1995). A Note on the Large Deviation Properties of the Signed Square Root of the Likelihood Ratio Statistic, Technical report no. 411, Dept. of Statistics, University of Chicago. (Mostly incorporated into 'The accuracy of likelihood').

Mykland, P.A. (1995/96). Large and small deviations of the likelihood ratio statistic, Technical report no. 418, Department of Statistics, University of Chicago (mostly absorbed in 'Likelihood computations without Bartlett identities').

Aït-Sahalia, Y., and Mykland, P.A. (2000). The asymptotic properties of estimators of continuous time diffusions when the data are sampled at discrete and possibly random times (mostly absorbed by the two A&M papers above).

Appendix A: PH.D. STUDENTS SUPERVISED

PER ASLAK MYKLAND

January 2018

Name **Graduation Date**
Dissertation Title
Current Affiliation

Siu-Kai Chan March 1994
"Asymptotic Expansions for Martingales and Improvement of the P-value Estimate in the Two-sample Problem in Survival Analysis"

Nicole A. Lazar August 1996
"Some Inferential Aspects of Empirical Likelihood"
now Professor, Deptartment of Statistics, University of Georgia

Bo (Jennifer) Liang August 1997
"Options Pricing with Transaction Cost: An Asymptotic Approach"
now retired after a distinguished career in banking

Kaare K. Simonsen August 1997
"Simulating First Passage Times and the Maximum of Stochastic Differential Equations: An Error Analysis"
now with HSBC, London

Nancy Clements December 1997
"Estimating Treatment Effects in Observational Studies: Properties of an Estimator Based on Propensity Scores"
now with the Lewin Group, Virginia

Takaki Hayashi June 2000
"The Hedging of Contingent Claims under Model Uncertainty: A Data Driven Approach"
now Professor, Graduate School of Business, Keio University, Japan

Seongjoo Song June 2001
"Options and Discontinuity: An Asymptotic Decomposition for Trading Algorithms
now Associate Professor, Korea University at Seoul

Lan Zhang, June 2001
"From Martingales to ANOVA: Implied and Realized Volatility"
now Professor, Department of Finance, University of Illinois at Chicago

Rituparna Sen August 2004
"Modeling the Stock Price Process as a Continuous Time Jump Process"
now Assistant Professor, Indian Statistical Institute, Chennai (Madras)

Suzanne (Seoyeon) Lee June 2005
"The Detection of Jumps in Financial Data"
(Ph.D. from Econometrics group in University of Chicago Graduate School of Business)
now Associate Professor, College of Management, Georgia Institute of Technology

Oli Atlason August 2008
"Generalized Parametric Models"
now at Tower Research Capital, Chicago

Yingying Li August 2008
"Robustness of Volatility Estimation"
now Associate Professor, Hong Kong University of Science and Technology

Dale Rosenthal August 2008
"Trade Classification and Nearly-Gamma Random Variables"
now Clinical Assistant Professor, Department of Finance, University of Illinois at Chicago

Phillip Lynch August 2009
"Locally Mean Reverting Processes"
now with Chopper Trading, Chicago

Christina (Dan) Wang August 2012
"The Estimation of Leverage Effect with High Frequency Data"
now Assistant Professor, Department of Statistics, Columbia University

Yoann Potiron March 2016
"Estimating the Integrated Parameter of the Locally Parametric Model in High-Frequency Data"
now Assistant Professor (with tenure) at Keio University, Japan

Richard Chen August 2019 (expected)

Dachuan Chen (at UIC, advised jointly with Lan Zhang) August 2020 (expected)

Disclaimer: institutions and rank are to the best of my knowledge.

Appendix B: INVITED PRESENTATIONS SINCE 1990*

PER ASLAK MYKLAND

January 2018

Department of Statistics, University of Wisconsin, Madison (April 1990)

IMS special topic meeting on the Bootstrap, East Lansing (May 1990)

IMS Annual Meeting/Second World Congress of the Bernoulli Society, Uppsala, Sweden (August 1990)

Joint Statistical Meetings (ASA/IMS/Biometric Society), Atlanta, Georgia (August 1991)

MSRI, Berleley (April 1992)

IMS WNAR and Biometrics Society Meeting at Corvallis (June 1992)

Joint Statistical Meetings (ASA/IMS/Biometric Society), Boston (August 1992)

IMS meeting on Variations on the Likelihood Theme, Penn State University (October 1992)

Department of Statistics, Penn State University (December 1992)

Department of Statistics, University of Chicago (March 1993)

Second International Symposium: Probability and Applications, Bloomington, Indiana (March 1993)

Department of Statistics, University of Wisconsin, Madison (May 1993)

IMS/WNAR Meeting in Laramie, Wyoming (June 1993)

Conference of the Norwegian Statistical Association (NSF), Ustaoset (June 1993)

IMS New Researchers Meeting, Berkeley (August 1993)

Joint Statistical Meetings (ASA/IMS/Biometric Society), San Fransisco (August 1993)

Department of Statistics, University of Georgia, Athens (October 1993)

Department of Statistics, Northwestern University (October 1993)

Department of Statistics, Purdue University (November 1993)

Los Angeles (June 1994)

Annual IMS Meeting/Third World Congress of the Bernoulli Society, Chapel Hill (June 1994)

Fifteenth Nordic Conference on Mathematical Statistics, Lund, Sweden (August 1994)

Department of Statistics, Columbia University (September 1994)

Department of Statistics, Rutgers University (September 1994)

Department of Statistics, University of Nebraska, Lincoln (September 1994)

Department of Statistics, Hong Kong University (March 1995)

Workshop on small-sample asymptotics, Brixen (June 1995)

IMS meeting, Montréal (July 1995)

Department of Statistics, Chinese University of Hong Kong (October 1995)

American Statistical Association annual meeting (August 96)

Columbia University Statistics Department (December 96)

American Mathematical Society conference, San Diego (January 1997)

Chicago Statistical Association (February 1997)

U.C. Berkeley Statistics Department (March 1997)

Institute of Mathematical Statistics, Asian/Pacific Regional Meeting, Taipei (July 1997)

Center for Mathematical Sciences, U.W. Madison (July 1997) (five lectures)

Centre de recherches mathématiques, Université de Montréal, Summer School on Likelihood and Asymptotics,

Banff, Canada (July 1997)

Centre de recherches mathématiques, Université de Montréal, Workshop on Symbolic Computation, Montreal (September 1997)

Department of Statistics, Michigan State University (October 1997)
Department of Statistics, Carnegie-Mellon University (October 1997)
Department of Mathematics, Tulane University (November 1997)
Financial Engineering Workshop, University of Chicago (December 1997)
Department of Statistics, UCLA (extended visit, March 1998), including workshop on finance
The Chicago Risk Management Workshop (Univ. of Illinois at Chicago and NationsBank) (April 1998)
Department of Theoretical Statistics, University of Copenhagen (June 98)
Special invited lecture at the semi-annual Scandinavian statistical congress, Elsinore, Denmark (June 1998)
Institute of Mathematical Statistics, meeting with WNAR, San Diego (June 1998)
Institute of Mathematical Statistics, annual meeting, Dallas (August 1998)
Taiwan International Statistical Symposium, Taipei (August 1998)
International Chinese Statistical Association conference, Kunming (August 1998)
Department of Statistics, Ohio State University (September 1998)
Clifford Conference, Tulane University (October 1998)
Morgan Stanley, New York (December 1998)
Department of Economics, Princeton University (December 1998)
Indian Statistical Institute, Calcutta (March 1999)
Mathematical finance seminar, University of Wisconsin, Madison (March 1999)
Department of Statistics, Columbia University (May 1999)
Interface conference, Shaumburg (June 1999)
Stochastic Processes and Applications conference, Beijing (June 1999)
NSF/NBER time series conference, Taipei (August 1999)
Department of Mathematics, University of Oslo (August 1999)
Department of Statistics, Rutgers University (September 1999)
Bell Labs (October 1999)
Department of Statistics, Yale University (October 1999)
Department of Statistics, Wharton School, University of Pennsylvania (December 1999)
Department of Operations Research and Financial Engineering, Princeton University (January 2000)
Econometrics and Statistics Group, Graduate School of Business, The University of Chicago (February 2000)
Symposium on Inference for Stochastic Processes, Athens, Georgia (May 2000)
IMS/Bernoulli World Congress, Guanajuato, Mexico (May 2000)
Symposium on Likelihood and Asymptotics, Ascona, Switzerland (July 2000)
World Congress of the Econometric Society, Seattle (refereed contributed, August 2000)
International Conference on Monte Carlo and Quasi-Monte Carlo Methods, Hong Kong (November 2000)
European Conference of the Econometrics Community, Dublin, Ireland (Econometrics Journal invited lecture) (December 2000)
Department of Statistics, Colorado State University, Fort Collins (February 2001)
Department of Statistics, Columbia University (February 2001)
Department of Statistics, University of Toronto (March 2001)
The Applied Probability Day, Columbia University (April 2001)
Newton Institute, Cambridge, UK (July 2001)
Handbook of Financial Econometrics Conference, Princeton University (November/December 2001)
Department of Economics, Brown University (December 2001)
IMS Annual Meeting, Banff, Canada (Medallion Lecture, June 2002)
Department of Economics, Princeton University (December 2002)

Conference on Nonparametric Statistics, Talahassee (January 2003)

Computational Finance Seminar, Purdue University (March 2003)

IMS/ASA annual meeting, San Francisco (August 2003)

Conference on Realized Volatility, University of Montréal (November 2003)

Workshop on Statistics in Finance, Oberwolfach (January 2004)

Department of Statistics, Department of Mathematics, Carnegie Mellon University (March 2004)

Department of Operations Research and Financial Engineering, Princeton University (March 2004)

Department of Statistics, Yale University (March 2004)

Department of Statistics, University of Connecticut (March 2004)

Department of Statistics, University of California, Berkeley (April 2004)

International Chinese Statistical Assoc., Applied Statistics Symposium (San Diego, June 2004)

ETH Zurich Department of Statistics (July 2004)

IMS Annual Meeting, Barcelona (July 2004)

Conference on operator methods in microeconometrics, time series, and finance, University of Montréal (November 2004)

Stern School of Business, New York University (January 2005)

Department of Statistics, University of Wisconsin, Madison (March 2005)

The 55th Session of the International Statistical Institute, Sydney, Australia (April 2005)

The 2nd Purdue Minisymposium on Financial Mathematics (April 2005)

Department of Statistics, University of Pennsylvania (April 2005)

CIRANO-CIREQ Financial Econometrics Conference, University of Montréal (discussant) (April 2005)

Princeton-Chicago Conference on the Econometrics of High Frequency Financial Data, Bonita Springs, Florida (June 2005)

Conference on Financial Engineering and Risk Management, Shanghai, China (July 2005)

Inaugural workshop on Statistics, Chinese Academy of Sciences, Beijing, China (July 2005)

Joint Meeting of the Chinese Society of Probability and Statistics (CSPS) and the Institute of Mathemetical Statistics, Beijing, China (July 2005)

Newton Institute, Cambridge, UK (July 2005)

European Regional Meeting of the Bernoulli Society, Oslo, Norway (July 2005)

IMS/ASA Annual Meeting, Minneapolis (discussant) (August 2005)

Workshop on Financial Mathematics, Statistics and Econometrics, SAMSI, North Carolina (Sept 2005)

Citadel Investment Group, Chicago (Dec 2005)

Department of Finance, Kellogg School of Business, Northwestern University (March 2006)

Workshop on Risk Measures and Risk Management for High-Frequency Data, EURANDOM, Eindhoven (The Netherlands) (March 2006)

Department of Statistics, Rice University (April 2006)

CIREQ Conference on Realized Volatility, University of Montréal (April 2006)

CIRANO-CIREQ Financial Econometrics Conference, University of Montréal (May 2006)

Statistics at the Frontiers of Science, Banff International Research Station (June 2006)

International Symposium on Financial Engineering and Risk Management, Xiamen (Amoy) University (China) (July 2006)

IMS annual meeting, Rio de Janeiro (July 2006)

Department of Statistics, Columbia University (Oct 2006)

Department of Statistics, University of Illinois at Urbana-Champaign (Nov 2006)

Department of Finance and Management Science, Norwegian School of Business Administration (Dec 2006)

Department of Industrial Engineering and Management Sciences, Northwestern University (Feb 2007)

Department of Statistics, University of Florida, Gainesville (Feb 2007)
Department of Industrial and Systems Engineering, University of Florida, Gainesville (Feb 2007)
Department of Applied Mathematics, Illinois Institute of Technology (Feb 2007)
Department of Mathematics, University of Illinois at Chicago (Apr 2007)
Conference on Volatility and High Frequency Data, University of Chicago (Apr 2007)
Séminaire Européen de Statistique 2007, Cartagena, Spain (May 2007)
London School of Economics (May 2007)
Conference on Financial Econometrics, Imperial College, London (May 2007)
Department of Finance and Management Science, Norwegian School of Business Administration (May 2007)
Econometric Study Group conference, Bristol, UK (July 2007)
Weierstrass Institute, Berlin (July 2007)
International Symposium on Business and Industrial Statistics, Ponta Delgada, Azores (August 2007)
Departments of Economics and Statistics, Cornell University (October 2007)
Conference of Likelihood Methods, Princeton University (October 2007)
School of Operations Research and Information Engineering, Cornell University (November 2007)
Department of Statistics, University of California, Davis (January 2008)
Departments of Finance and ISMT, Hong Kong University of Science and Technology (February/March 2008)
Conference on The Mathematics and Statistics of Quantitative Risk Management, Oberwolfach, Germany (March 2008)
Smurfit School of Business, University College Dublin (March 2008)
Workshop on Finance and Statistics, Chicago (April 2008)
Oxford-Man Institute, Oxford University (June 2008)
Society for Financial Econometrics inaugural conference (June 2008)
Bachelier Finance Society World Congress (July 2008)
Vast Data Conference, Oxford (September 2008)
Department of Economics, Stanford University (October 2008)
North Carolina Research Triangle Econometrics Conference (keynote speaker) (Dec 2008)
Econometrics Conference, Skagen, Denmark (June 2009)
Department of Economics, London School of Economics (October 2009)
Oxford-Man Institute, University of Oxford (October 2009)
Nomura Centre for Mathematical Finance, University of Oxford (November 2009)
German Open Conference in Probability and Statistics, Leipzig (March 2010)
Department of Statistics, University of Oxford (March 2010)
Conference on Robust Techniques in Quantitative Finance, University of Oxford (March 2010)
Oxford Signals Day, University of Oxford (April 2010)
Toulouse School of Economics (April 2010)
Workshop on Risk Management and High Frequency Data (Brunel University, May 2010)
Nordic Conference in Statistics (NORSTAT 10), Voss (June 2010)
International Symposium on Business and Industrial Statistics, Portoroz, Slovenia (July 2010)
Econometric Society World Congress, Shanghai (August 2010) (contributed refereed)
Minisymposium for Dag Tjøstheim's birthday, Bergen (October 2010)
SoFiE-CREATES conference, Aarhus (October 2010)
Conference on Market Microstructure, Institut Louis Bachelier, Paris (December 2010)

Distinguished Lecture Series, Center for Applied Statistics and Economics, Humboldt-Universität zu Berlin (January 2011)

Society for Financial Econometrics (SoFiE), Chicago (June 2011) (contributed refereed)

Fifth Annual Risk Management Conference, Risk Management Institute, National University of Singapore (July 2011)

Guanghua School of Business, Peking University (July 2011)

Conference: Modeling High Frequency Data in Finance 3, Hoboken, NJ (July 2011)

Joint Statistical Meetings, Miami Beach, Florida (August 2011)

Second Conference of Tsinghua Sanya International Mathematics Forum and Tsinghua Sanya International Economics Roundtable, Sanya, Hainan, China (December 2011)

Department of Economics, Brown University (March 2012)

Department of Statistics, Rutgers University (March 2012)

Department of Statistics, Columbia University (March 2012)

Department of Mathematics and Statistics, University of Missouri at Kansas City (April 2012)

Department of Mathematics, Kansas University at Lawrence (April 2012)

Bendheim Center for Finance, Princeton University (May 2012)

Conference on Financial Engineering and Risk Management, Changsha, Hunan, China (July 2012)

Risk Management Institute, National University of Singapore (July 2012)

Mathematical Sciences Center, Tsinghua University (July 2012)

Department of Mathematics, University of Maryland (October 2012)

Department of Statistics retreat, The University of Chicago (October 2012)

World Congress of the International Statistical Institute, Hong Kong (August 2013)

Workshop on Statistical Inference for Complex Time Series Data, Oberwolfach, Germany (September 2013)

Presentation to the Scientific Committee for The European Intraday Financial Database (Equipex BED-OFIH), Paris (December 2013)

Conference on Statistics for Stochastic Processes and Analysis of High Frequency Data, Université Pierre and Marie Curie (Université Paris 6) (December 2013)

Finance Seminar, University of Zürich, Switzerland (February 2014)

Finance Group, University of Geneva, Switzerland (April 2014)

Department of Statistics, University of Oslo (June 2014)

Department of Economics, Princeton University (October 2014)

Robinson College of Business, Georgia State University (October 2014)

Bank of Norway, Oslo (November 2014)

School of Business, University of Stavanger (November 2014)

Workshop on Statistics and Econometrics of High-Frequency Data, Berlin (November 2014)

Econometric Society North American Winter Meeting, Boston (January 2015, contributed refereed)

Institute for Statistics and Operations Research, University of Vienna, Austria (June 2015)

Conference in Honor of Ole Barndorff-Nielsen, Aarhus (June 2015)

Society for Financial Econometrics (SoFiE) annual meeting, Aarhus, (June 23-26, 2015, contributed refereed)

Joint Statistical Meetings, Seattle (August 2015)

Market Microstructure and High Frequency Data, Chicago (May 2016)

International Forum on Statistics, Peking and Renmin University, Beijing (May 2016)

Society for Financial Econometrics (SoFiE) annual meeting, Hong Kong (June 2016, keynote speaker)

European Finance Association (EFA) annual meeting, Oslo (August 2016, contributed refereed)

Big Insight, University of Oslo (August 2016)

Department of Mathematics, University of Oslo (November 2016)

Bank of Norway, Oslo (December 2016)

Tinbergen Institute Amsterdam (April 2017)

Department of Mathematics, University of Bergen (May 2017)

Norwegian Statistical Association biannual meeting, Fredrikstad (June 2017)

Special focus conference series, Department of Statistics, Columbia University (August 2017)

Conference on Financial Econometrics, Boston University (September 2017)

Center for Financial and Risk Analytics, Stanford University (October 2017)

Planned Upcoming Presentations

Wilks Seminar, Princeton University (February 2018)

Workshop on High Frequency Econometrics, Rutgers University (April 2018)

FocuStat Conference, University of Oslo (May 2018)

Financial Econometrics Summer School, New York University and SoFiE, Shanghai (August 2018)

*The record of talks from before mid 1996 is based on later reconstruction; of these, some are approximate in terms of date, and some may have been contributed. The list may not be complete.