OLIVER LINTON

March, 2016

MAILING ADDRESS: Faculty of Economics
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CITIZENSHIP: British

PRESENT POSITION: Fellow of Trinity College and Professor of Political Economy, University of Cambridge, 2011-

PREVIOUS POSITIONS: Professor of Econometrics, Department of Economics
The London School of Economics and Political Science, July 1999-2011,
Member, Financial Markets Group, 2001-2011
Professor, Department of Economics and Department of Statistics
and Fellow, International Center for Finance
Yale University, July 1998–June 2000
Associate Professor,
Department of Economics
Yale University, July 1997–June 1998
Assistant Professor,
Department of Economics
Yale University, July 1993–June 1997
Research Fellow
Nuffield College, Oxford University, September 1991– June 1993

CONSULTING AND PUBLIC SERVICE:
Government
Econometric Consultant and Expert Witness, Financial Conduct Authority (da Vinci) 2014-15
Econometric Consultant and Expert Witness, Financial Services Authority (Swift Trade) 2008, 2012
Gave evidence to Parliamentary Commission on Banking Standards, 26/11/12.
Dept of BIS, Foresight project, Member of Lead Expert Group on Computer-based Trading, 2010-2012
Academic
Research Professor, Monash University, 2015
Programme Coordinator of Empirical Finance, Cambridge INET Institute, 2012-
Fellow, Centre for Microdata Methods And Practice, 2001-
Research Associate, IAM Research Program, 2002- 2005
Econometric Consultant on T.W. Guinnane's National Institute of Health
"Irish fertility at the turn of the Twentieth Century", 2003-2006

Private Sector
Econometric Consultant, Rio Tinto, 2011
Econometric Advisor, Hargreaves Lansdown, 2002-2006
Econometric Advisor, Royal and Sun Alliance 2004-2006
Econometric Advisor, Concordia Asset Management 2004-2005

HONORS AND PRIZES
Humboldt-Forschungspreis der Alexander von Humboldt Stiftung (2015)
Fellow, Society of Financial Econometrics (2015)
Elected Fellow, British Academy (2008)
Elected Fellow, Econometric Society (2007)
Fellow, Journal of Econometrics (2007)
Elected Fellow, Institute of Mathematical Statistics (2007)
Elected Member, International Statistical Institute (2006)
Plurima Scripsit, Econometric Theory (2011)
Plura Scripsit, Econometric Theory (2002)
Multa Scripsit, Econometric Theory (1998)
Ranked in the Top Three in World in Econometrics, 2000-2005
World wide Econometric rankings, Econometric Theory, B. Baltagi
Universidad Carlos III de Madrid-Banco Santander Chair of Excellence (2008-9)
Supervisor of the year award, LSE Economics department (2009)
Junior Faculty Fellow, Yale University (1996/97)
Regents Fellowship, UC Berkeley, 1986
Undergraduate Prize, LSE, 1983
Mathematics Prize, LSE, 1982

RESEARCH SUPPORT
Keynes Fund (2013) "The Effectiveness of Circuit Breakers on the LSE" £40,000
ERC 2008AdG NAMSEF "Nonparametric and Semiparametric Methods in Economics and Finance" 2009-2014, €1,200,000
ESRC RES-062-23-0772 "Nonparametric Methods for Empirical Finance and Microeconometrics" 2007-2009, £255,734.51
LEVERHULME TRUST F/07 004/AK: 2007-2009, £85,290
ESRC RES-051-27-0110 Research Professorship: 2004-2007, £523,066.91
ESRC R00023952: "Advances in Semiparametric and Nonparametric Research" 2001-2004, [with X. Chen and P.M. Robinson] £161,530.49
NSF SBR–9730282: "Asymptotic Approximations in Semiparametric and Separable Nonparametric Models" (1998–2000)
NSF SBR–9423102: "Asymptotic Approximations in Parametric and Semiparametric Models" (1995–1997)
NATO – 950150: "Generalized Additive Modelling with Applications" (1995-1997) [with W. Härdle]
DSSRC: "Nonparametric methods in Finance and Insurance" (1999-2002) [with C. Tanggaard and J. Nielsen]

GRADUATE STUDENTS SUPERVISED
Douglas Hodgson (Joint with P.C.B. Phillips): "Adaptive estimation in

cointegrated systems" (1995, Rochester)
Zhiejie Xiao (Joint with P.C.B. Phillips): "Efficiency issues in stationary and nonstationary time series" (1997, Illinois, Urbana-Champaign)
Woocheol Kim (Joint with P.C.B. Phillips): "Nonparametric Analyses of Evolutionary Time Series and Nonlinear Additive ARCH Models" (1999, Humboldt University, Berlin)
Moto Shintani (Joint with P.C.B. Phillips) "Nonparametric Econometrics for Nonstationary and Chaotic Data" (2000, Vanderbilt)
Thong Nguyen (Joint with A. Jeffrey and P.C.B. Phillips) "Essays on the Term Structure of Interest Rates" (2000, Hong Kong UST)
Dennis Kristensen "Estimation in two classes of Semiparametric Diffusion Models" (2004, Wisconsin, Madison)
David Jacho-Chavez "Identification, Estimation and Efficiency of Nonparametric and Semiparametric Models in Microeconometrics" (2006, Indiana, Bloomington)
Cristian Huse "Essays in Empirical Economics" (2007, Stockholm School of Economics)
Anisha Ghosh, "Essays in Financial Economics" (2009, Carnegie Mellon)
Ilze Kalnina, "Essays in Financial Econometrics" (2009, Montreal University)
Sorawoot Srisuma, "Essays in Microconometrics" (2010, Brown University)
Bonsoo Koo, "Locally stationary diffusion models with applications in Finance and Macroeconomics" (2011, Monash University)
Ziad Daoud, "Jumps in Continuous-Time Financial Econometrics" (2011, Fulcrum Asset Management)
Abhisek Banerjee, "Essays in Semiparametric Estimation of models with structural breaks" (2011, Noble Group)
Sujin Park, "Consistent estimator of ex-post covariation of discretely observed diffusion processes and its application to high frequency financial time series" (2011, Getco)
Yumin Yen, "Three Essays in Financial Econometrics" (2012, Academica Sinica)
Yang Yan, "Essays in Modelling and Estimating Value-at-Risk" (2014, Pictet Asset Management)
Lena Boneva (Körber), "Essays in panel data econometrics with cross-sectional dependence " (2015, Bank of England)
James Brugler, "Essays in Empirical Finance " (2015, University of Melbourne Business School)

GRADUATE STUDENTS IN PROGRESS
Seok Young Hong, Haihan Tang, Jeroen Dalderop, Ekaterina Smetanina, Dario Palumbo, Alexis de Boeck, Ryan Ng,

OTHER THESIS COMMITTEES
Yoosoon Chang, John Chao, Bin Bin Guo, Chang Sik Kim, Guido Kuersteiner, Chin-Chin Lee, John McDermott, Alex Maynard, Juan Mora, Hyungsik Moon, Benoit Perron, Michael Sabbatini, Marcia Schafgans, Frank Schorfheide, Katsumi Shimotsu, Joaquin Ramalho, Elena Martinez-Sanchez, Stepana Lazarova, Sheng Li, Paolo Parente, Ricardo Sousa, Le-Yu Chen, Heather Battey, Jiaquin Chen, Jianbin Wu

PROFESSIONAL SERVICE
Co-Editor, *Journal of Econometrics*, 2014-
Co-Editor, *Econometric Theory*, 2000-2014
Co-Editor, *Econometrics Journal*, 2007-2014

Associate Editor, *Econometrica* , 2003-2006, 2006-2009, 2009-2012, 2012-2015
Associate Editor, *Journal of the American Statistical Association Case Studies and Applications*, 2004-2007
Associate Editor, *Journal of Econometrics*, 1998-2007, 2012-2013
Guest Co-Editor (with J.P. Florens), *Special Issue of Econometric Theory on Inverse Problems*, 2008
Guest Co-Editor, *Special Issues of Journal of Econometrics*, 2004, 2006, 2010
Editorial Board, *Review of Economic Studies*, 1999-2006
Associate Editor, *Journal of Statistical Planning and Inference*, 2001
Associate Editor, *Econometric Theory*, 1996-1999
Programme Committee, *ES European Meetings*: Lausanne, 2001, Stockholm 2003, Madrid 2004, Madrid Winter 2014
World Congress London 2005, Budapest 2007, Milano 2008, Madrid Winter Meetings, 2014, World Congress Montreal 2015
Programme Committee, *SoFie*: Chicago, 2010
Regional Consultant for Great Britain and Ireland for the ESEWM, 2009-2011
External Examiner of Undergraduate Econometrics, University College London, 2002-2004
Scientific Committee, *FERM Meetings*: Peking University, 2007, 2014
Academic Planning and Resources Committee, LSE, 2001-2004
Appointments Committee, LSE, 2007-2009
Head of Junior Recruitment Committee, LSE, 2009
Review Group, Vienna Graduate School of Finance, 2013
Review Group, Economics Department, University of Copenhagen, 2011
Review Group, CREATES, University of Aarhuis, 2011
Review Group, Swiss Finance Institute, 2009-2011
Programme Director, MSc Econometrics and Math Econ, LSE from Oct 2007-2010
International Advisory Board, SRM University Group, Chennai, India, 2004-
Panel of Advisors, Commonwealth Scholarship Commission, 2004-2007

Referee for other journals: *Econometrica, Biometrika, The Annals of Statistics, Journal of Econometrics, Journal of the Royal Statistical Society Series B, Journal of the American Statistical Association, Journal of Business and Economic Statistics, Journal of Applied Econometrics, Review of Economics and Statistics, Review of Financial Studies, Oxford Economic Papers, Journal of Mathematical Finance, Journal of Development Economics, Italian Journal of Statistics, Annals of the Institute of Statistical Mathematics, International Journal of Forecasting, Journal of Quantitative Economics, Econometric Reviews, Journal of Computational and Graphical Statistics, Statistics and Computing, Journal of Population Economics, European Journal of Finance, Economic and Social Science Research Council, National Science Foundation, TEST, Journal of Statistical Planning and Inference, Journal of Statistical Computation and Simulation, Statistica Sinica, Statistics and Probability Letters, Journal of Multivariate Analysis, Bernoulli, Scandinavian Journal of Statistics, Metrika, Journal of Applied Economics, Journal of Empirical Finance, Food Policy, Springer, Cambridge University Press, Tourist Management, Empirical Economics, Journal of Human Resources etc.*

EDUCATION
MA, Yale University (1998)
MA, Oxford University (1993)
PhD in Economics, UC Berkeley, 1991

MSc in Econometrics and Mathematical Economics, LSE, 1986
BSc (1st Class) in Mathematics, LSE, 1983

PhD THESIS
"Edgeworth Approximation in Semiparametric Regression Models," UC Berkeley, July 1991. PhD Advisor: Professor T. J. Rothenberg

INVITED CONFERENCE TALKS AND LECTURES
Keynote speaker, FERM, Guangzhou, June 2016. Halbert White Jr. Memorial JFEC Invited Lecture, Sofie, Aarhus, June 2015, Barcelona Summer Forum, June 2015, FERM invited speaker, Beijing, June 2014, Likelihood and Simplicity, Tel Aviv, January 2014, Mathematics for New Economic Thinking, Toronto, November, 2013, SETA, ET Lecturer, Seoul, July 2013, Shandong University, July 2013, Risk, Institute Louis Bachelier http://risk2013.institutlouisbachelier.org/, March 2013, Research Triangle Annual Econometric conference, December 2012, NUS-IMS thematic programme on Financial Time Series, June 2012, Anniversary conference, UCL Louvain la-Neuve, May 2012, Conference in Honour of Cheng Hsiao, Chengdu, May, 2012, Belgian Statistical Society, Hasselt, Belgium, October 2011, ESEM, Oslo, August 2011, ESAM, Adelaide, July 2011, IMS, APRM, Tokyo, July 2011, National Quantitative Economics Conference, Shanghai March 2010, Conference in honour of Howell Tong, Hong Kong, November 2009, ISI Durban, August 2009 (Discussant), FEMES, Singapore, July 2008, Computation and Financial Econometrics, Neuchatel, June 2008, SETA, Seoul, May 2008, Tilburg, March 2008, Lugano, February 2008, Bergamo, January 2008, Conference in Honour of Carlo Giannini, Bristol, November, 2007, LACEA-LAMES, Bogota, October 2007, Canadian Study Group, Montreal, September 2007, University of Chicago Center for Quantitative Finance, April 2007, UCL Lectures, Louvain-la-Neuve, May 2007, CASE Lectures, Berlin, January 2007, Time Series Econometrics, Finance and Risk, Perth, WA, June 2006, CEMMAP Master Class on Nonparametrics, May, 2006, Far Eastern Econometric Society, Beijing, July 2006, Centre for Analytical Finance, Sonderborg, Denmark, June, 2006, Invited Discussant, World Congress of the Econometric Society, London, August 2005, ISI Sydney, April 2005, Semiparametrics in Rio, Rio de Janeiro, July 2004, Karlsruhe Stochastik Tage, Karslruhe, March 2004, International Conference, Waseda University, Tokyo, January 2004, International Conference, SRM University, Chennai, India, January 2004, European Econometric Society Meetings, Stockholm, September 2003, ISI meetings, Berlin, August 2003, Far Eastern Econometric Society Meetings, Seoul, July 2004, Latin American Econometric Society Meetings, Sao Paolo, July 2002, Common Features in Rio, July 2002, Lausanne, FAME/HEC lectures July 2002, Advances and Trends in Nonparametric Statistics Crete, July 2002, Monte Verita, Ascona, April 2002, Rome, Tor Vergata, April 2002, Oberwolfach, September 2000, Interface, Chicago, June 1999, Australian Econometric Society, July 1998, Benjamin Meeker Visiting Speaker, Bristol, U.K., May 1996

CONFERENCE CO-ORGANIZATION
INET/CEMMAP conference on big data, June, 2015; SOFIE/INET Conference, April, 2014; CEMMAP conference on high dimensional data, November, 2013; Oberwolfach conference, Statistical inference for complex time series data, September 2013; Conference on Stochastic Dominance and Related Themes, Cambridge June 2013; Conference in Honor of Joel Horowitz, June, 2011; ERC/Cemmap conference on Robust Methodology, April, 2011; Banff conference on Nonparametric and Semiparametric Methods, April, 2009; LSE/UC3M student day, March, 2009, April 2010; CEMMAP conference on Factor models, London, November, 2008; Forecasting in

Rio, August, 2008; ESRC Econometric Study Group, 2007-2009; Conference in Honour of P.M. Robinson, London, May, 2007; Sargent and Sims Colloquium, LSE, May, 2007; Oberwolfach conference on Nonparametric and Semiparametric Methods, March, 2007; Royal Economic Society, Job Market Conference, January, 2007; Programme Co-Chair, Econometric Society European Meetings, Vienna 2006; Econometric Study Group/CEMMAP conference on Nonparametric and Semiparametric Methods, May, 2006; CEMMAP conference on Testing Stochastic Dominance Restrictions, November, 2005; Econometric Study Group conference on Inverse Problems, November 2004; Semiparametrics in Rio, July 2004

PUBLICATIONS

Forthcoming

[131] Multivariate Variance Ratio Statistics (with Hui Jun Zhang and Seok Young Hong). Halbert White Lecture, Journal of Financial Econometrics

[130] Estimation of semiparametric models for large panels with application to Market Fragmentation. (with L. Boneva (Körber) and M. Vogt) *Journal of Econometrics*

[129] Quantile Regresion Applications in Finance (with X. Ziao)

[128] A ratio test of the Martingale Hypothesis for Gross Returns (with E. Smetanina) *Journal of Empirical Finance*

[127] Nonparametric Testing of a Strong Leverage Effect (with Y. Whang and Y. Yen). *Journal of Econometrics*

[126] Classification of nonparametric regression functions in longitudinal data models (with M. Vogt) *Journal of the Royal Statistical Society, Series B.*

[125] Semiparametric Dynamic Portfolio Choice with Multiple Conditioning variables (with J. Chen, D. Li and Z. Lu) *Journal of Econometrics*

[124] Discussion of A. Ron Gallant (with R. Wu). *Journal of Financial Econometrics*

[123] Estimating the quadratic covariation matrix for an asynchronously observed continuous time signal masked by additive noise (with S. Park and S.Y. Hong) *Journal of Econometrics*

[122] A Flexible Semiparametric Model for Time Series (with D. Li and Z. Lu) *Journal of Econometrics*

[121] The Cross-Quantilogram: Measuring Quantile Dependence and Testing Directional Predictability between Time Series (with Heejoon Han, Tatushi Oka, and Yoon Jae Whang). *Journal of Econometrics*

2016

[120] Averaging of an increasing moment condition estimators (with X. Chen and D. Jacho-Chavez) *Econometric Theory* 32, 30-70.

[119] The effect of fragmentation in Trading on Market Quality in the UK Equity Market (with L. Boneva (Körber) and M. Vogt). *Journal of Applied Econometrics 31 192-213*

[118] Non-parametric transformation regression with non-stationary data (with Qiying Wang). *Econometric Theory* 32, 1-29

2015
Aliens stole my papers!
2014

[117] Lets Get LADE: Robust Estimation of Semiparametric Multiplicative Volatility Models (with B. Koo). *Econometric Theory.* 2014, Page 1 of 32. doi:10.1017/S0266466614000516

[116] Testing Conditional Independence Restrictions (with P. Gozalo) *Econometric Reviews* Special issue in honour of Les Godfrey. Vol. 33, Iss. 5-6, 2014

[115] The Regulatory Challenge of High-Frequency Markets (with M. O'Hara and J.P. Zigrand). *Risk books.* Eds. D. Easley, M. Lopez de Prado and M. O'Hara

[114] Testing for Stochastic Dominance Efficiency (with T. Post and Y. Whang). *Econometrics Journal* 17,2 59-74.

[113] Nonparametric Estimation of Periodic Functions and Smooth Trends (with M. Vogt). *Biometrika* 101 (1): 121-140 doi:10.1093/biomet/ast051

[112] Nonparametric estimation of multivariate elliptic densities via finite mixture sieves (with H. Battey) *Journal of Multivariate Analysis.* Volume 123, pp 43-67.

2013

[111] Global Bahadur Representation for nonparametric censored regression quantiles and its applications (with E. Kong and Y. Xia) *Econometric Theory.* Volume 29, Issue 05, pp 941-968

[110] Realized Volatility: Theory and Application (with S. Park) *The Handbook of Volatility and Their Applications* (eds L. Bauwens, C. Hafner and S. Laurent), John Wiley & Sons, Inc., Hoboken, NJ, USA. doi: 10.1002/9781118272039.ch13

[109] Estimation and Inference regarding Expected Shortfall for time series with infinite variance. (with Z. Xiao) *Econometric Theory* 29, 4, 771-807.

2012

[108] Semiparametric Estimation of Locally Stationary Diffusion Processes (with B. Koo). *Journal of Econometrics* 170, 210-233.

[107] Efficient Estimation of a Semiparametric Characteristic-Based Factor model for Security Returns (with G. Connor and M. Hagmann) *Econometrica* 80, 713-754

[106] Nonparametric estimation and inference about the overlap of two distributions (with G. Anderson and Y. Whang). *Journal of Econometrics.* November 2012 issue Volume 171, issue 1, pp. 1-23.

[105] What has happened to UK Equity Market Quality in the last decade? An analysis using daily data. Foresight project on The Future of Computer Trading in Financial Markets. http://www.bis.gov.uk/foresight/our-work/projects/current-projects/computer-trading/working-paper

[104] The impact of computer trading on liquidity, price efficiency/discovery and transaction costs (with M. O'Hara) Foresight project on The Future of Computer Trading in Financial Markets. http://www.bis.gov.uk/assets/bispartners/foresight/docs/computer-trading/11-1276-the-future-of-computer-trading-in-financial-markets (see Financial Times http://www.ft.com/cms/s/0/38452 da07-11e0-b199-00144feabdc0.html#axzz1XNEqFAwq)

[103] Local Linear Fitting under Near-Epoch Dependence: Uniform Consistency with Convergence Rates (with D. Li and Z. Lu). *Econometric Theory* 28, 1-24

[102] Semiparametric Estimation of Markov Decision Processes with Continuous State Space: Discrete Control (with S.T. Srisuma). *Journal of Econometrics.* 166(2): 320-341

[101] Making Inferences about Rich Country-Poor Country Convergence: The Polarization Trapezoid and Overlap Measures (with G. Anderson and T. Wah Leo). *Journal of Economic Growth* 17, 49-69

2011

[100] Semi- and Nonparametric ARCH/GARCH-Modeling. (with Y. Yan) *Journal of Probability and Statistics* http://dx.doi.org/10.1155/2011/906212

[99] Computationally and Statistically Efficient Single Index Estimation (with Y. Xia and W. Härdle). Festschrift for Leopold Simar. Eds. I. Van Keilegom. Springer, Berlin.

[98] Nonparametric Regression with Filtered Data (with E. Mammen, J.P. Nielsen, and I. Van Keilegom). *Bernoulli* 17, 60-87

[97] Multivariate Density Estimation using Dimensionality Reducing Model Information (with J. Nielsen, T. Buche-Larsen, and M. Guillen). *Insurance: Mathematics and Economics* 48, 99-110.

[96] Estimating Features of a Distribution from Binomial Data (with A. Lewbel and D. McFadden) *Journal of Econometrics* 162, 170-188.

[95] A Semiparametric Model for Climate Change (with A. Atak and Z. Xiao) *Journal of Econometrics.* 164, pp. 92-115

[94] Evaluating Value-at-Risk Models via Quantile Regression (with Wagner Piazza Gaglianone, Luiz Renato Lima, and Daniel R. Smith) *Journal of Business and Economic Statistics* Jan 2011, Vol. 29, No. 1: 150–160.

[93] Estimation of a Semiparametric IGARCH Model (with W. Kim) *Econometric Theory Special Issue on Inverse Problems* 27, 639-662.

[92] Introduction to the Special Issue on Inverse Problems (with J.P. Florens) *Econometric Theory Special Issue on Inverse Problems* 27, 457-459.

2010

[91] Bootstrap tests of stochastic dominance with asymptotic similarity on the boundary. (with K. Song and Y.J. Whang) *Journal of Econometrics* 154, 186-202

[90] Efficient estimation of a multivariate multiplicative volatility model (with C. Hafner). *Journal of Econometrics* 159, 55-73.

[89] Estimation for a non-stationary semi-strong GARCH(1,1) model with heavy tailed errors (with J. Pan and H. Wang) *Econometric Theory* 26, 1-28.

[88] Evaluating Hedge Fund Returns: A stochastic dominance approach (with S. Li), in *The Handbook of Portfolio Construction: Contemporary Applications of Markowitz Techniques* ed. John Guerard, Jr. Springer Verlag Date published: 2009-12-30 ISBN-13: 9780387774381 ISBN: 0387774386

[87] The asymptotic Distribution of Internally Corrected Kernel Estimators for Nonparametric Regression (with D. Jacho-Chavez). *TEST* 19, 166-186

[86] Identification and Nonparametric Estimation of a transformed Additively Separable Model (with D. Jacho-Chavez and A. Lewbel). *Journal of Econometrics* 156, 392-407

[85] Uniform Bahadur Representation for Local Polynomial Estimates of M-Regression and its application (with E. Kong and Y. Xia) *Econometric Theory* 26, 1529-1564

2009

[84] Semi- and Nonparametric ARCH/GARCH-Modeling. *Handbook of Financial Time Series* eds. Anderson, Davis, Kreiss, and Mikosch.

[83] Testing for Stochastic Monotonicity (with S. Lee and Y. Whang) *Econometrica* 77, 585-602

[82] A nonparametric threshold model with application to zero returns. *FERM Special Issue of Statistics and Its Interface* 1.2, 321-326.

[81] Consistent Estimation of A General Nonparametric Regression Function in Time Series (with A. Sancetta) *Journal of Econometrics* 152, 70-78.

[80] Nonparametric Regression with a Latent Time Series (with J.P. Nielsen and S.F. Nielsen) *Econometrics Journal* 12, 187-207.

2008

[79] Nonparametric Transformation to White Noise (with E. Mammen) *Journal of Econometrics* 141, 241-264.

[78] Estimating Quadratic Variation Consistently in the presence of Correlated Measurement Error (with I. Kalnina) *Journal of Econometrics* 147, 47-59.

[77] Estimation of a Semiparametric Transformation Model by Minimum Distance (with S. Sperlich and I. Van Keilegom) *The Annals of Statistics* 36, 686-718.

[76] ARCH Models *The New Palgrave Dictionary of Economics, 2nd Edition,* Edited by Steven N. Durlauf and Lawrence E. Blum

[75] Local Regression Models *The New Palgrave Dictionary of Economics, 2nd Edition,* Edited by Steven N. Durlauf and Lawrence E. Blum

2007

[74] Asymptotic Distributions for Local Polynomial Nonparametric Regression Estimators under weak dependence (with Z. Lu) *Econometric Theory* 23, 37-70.

[73] A Nonparametric Regression Estimator that Adapts to Error Distribution of Unknown Form (with Z. Xiao) *Econometric Theory* 23, 371-413

[72] Nonparametric Matching and Efficient Estimators of Homothetically Separable Functions (with A. Lewbel) *Econometrica*, 75, 1209-1228.

[71] Discussion of Ait-Sahalia and Shephard (with I. Kalnina) *World Congress, Cambridge University Press*

[70] Semiparametric Estimation of A Characteristic Based Factor Model (with G. Connor). *Journal of Empirical Finance* 14, 694-717.

[69] Are There Monday Effects in Stock Markets? A Stochastic Dominance Approach (with Y. Cho and Y. Whang) *Journal of Empirical Finance* 14, 736-755.

[68] A Quantilogram approach to testing for Directional Predictability (with Y. Whang) *Journal of Econometrics* 141, 250-282.

[67] A Smoothed Least Squares Estimator for the Threshold Regression Model (with M. Seo) *Journal of Econometrics* 141, 704-735

[66] Higher-order Asymptotic Theory when a parameter is on the boundary with an application to GARCH Models (with E. Iglesias) *Econometric Theory* 23, 1136-1161

2006

[65] Flexible Term Structure Estimation: Which Method is Preferred? (with A. Jeffrey and T. Nguyen) *Metrika* January, 1-24.

[64] The Froot-Stein Model Revisited (with N. Hogh and J.P. Nielsen) *The Annals of Actuarial Science* 1, 37-48.

[63] The Common and Specific Components of Dynamic Volatility (with G. Connor and R. Korajczyk). *Journal of Econometrics* 132, 231-255.

[62] A Closed-form Estimator for the GARCH(1,1)-Model (with D. Kristensen) *Econometric Theory* 22, 323-327.

[61] Discussion of Koenker and Xiao (with C. Hafner) *Journal of the American Statistical Association* 101, 998-1001.

2005

[60] Estimating Semiparametric ARCH Models by Kernel Smoothing Methods (with E. Mammen) *Econometrica* 73, 771-836.

[59] Testing for Stochastic Dominance under general conditions: A subsampling approach (with Y. Whang and E. Maasoumi) *Review of Economic Studies* 72, 735-765. Corrigendum, 2007, 75, 1-5.

[58] Nonparametric Inference for Unbalanced Time Series Data *Econometric Theory, 20th Anniversary Special Issue* 21, 143-157.

[57] Asymptotic expansions for some semiparametric program evaluation estimators (with H. Ichimura) *Cambridge University Press, Volume in Honour of Tom Rothenberg, Eds. D.W.K. Andrews and J. Stock*.

2004

[56] Nonparametric Neural Networks estimation of Lyapunov Exponents (with M. Shintani). *Journal of Econometrics* 120, 1-34.

[55] Non-Parametric Estimation of Multi-Factor Heath Jarrow Morton Term Structure Models (with A. Jeffrey, D. Kristensen, T. Nguyen, and P.C.B. Phillips) *Journal of Financial Econometrics* 2, 251-289.

[54] Semiparametric Regression Analysis for Missing Response Data (with Q. Wang and W. Härdle) *Journal of the American Statistical Association* 99, 334-345.

[53] Limit theorems for estimating the parameters of differentiated product demand systems (with S. Berry and A. Pakes). *Review of Economic Studies* 71, 613-654.

[52] Testing forward exchange rate unbiasedness efficiently: A Semiparametric Approach (with D. Hodgson and K. Vorkink) *Journal of Applied Economics* 7, 1, 325-353

[51 The LIVE Method for Generalized Additive Volatility Models (with W. Kim). *Econometric Theory* 20, 1094-1139.

2003

[50] Estimating Multiplicative and Additive Hazard Functions by Kernel Methods (with J.P. Nielsen and S. van de Geer). *The Annals of Statistics* 31, 2, 464-492.

[49] Is there Chaos in the World Economy? A Test Using Nonparametric Regression (with M. Shintani). *International Economic Review* 44, 331-357

[48] Some higher order theory for a consistent nonparametric model specification test. (with Y. Fan) *The Journal of Statistical Planning and Inference* 109, 1-2, 125-154

[47] The shape of the risk premium: Evidence from a semiparametric-mean GARCH model (with B. Perron) *Journal of Business and Economic Statistics* 2003, 354-367.

[46] Estimation of Semiparametric Models when the Criterion is not Smooth (with X. Chen and I. Van Keilegom) *Econometrica* 71, 1591-1608.

[45] Nonparametric smoothing methods for a class of non-standard curve estimation problems (with E. Mammen) in *Recent Advances and Trends in Nonparametric Statistics* pp 203-216, Elsevier, Amsterdam

[44] More Efficient Local Polynomial Estimation in Nonparametric Regression with Autocorrelated Errors (with Raymond J. Carroll, Enno Mammen, and Zhijie Xiao) *Journal of the American Statistical Association* 98, 980-992.

[43] Accounting for Correlation in Marginal Longitudinal Nonparametric Regression (with R.J. Carroll, X. Lin, and E. Mammen) *Second Seattle Symposium on Biostatistics*, editor D. Lin.

2002

[42] Nonparametric Estimation with Aggregated Data (with Yoon Whang) *Econometric Theory* 18, 420-468.

[41] Edgeworth approximations for semiparametric instrumental variable estimator and test statistics. *Journal of Econometrics* 106, 325-368.

[40] Nonparametric Censored and Truncated Regression (with A. Lewbel). *Econometrica* 70, 765-780.

[39] A Nonparametric Prewhitened Covariance Estimator (with Z. Xiao) *Journal of Time Series Analysis* 23, 215-250.

[38] Testing the CAPM efficiently under elliptical symmetry: A Semiparametric Approach (with D. Hodgson and K. Vorkink). *Journal of Applied Econometrics* 17, 617-639

2001

[37] Estimation of Linear Regression Models from Bid-Ask Data by a Spread-Tolerant Estimator *Annals of Economics and Finance* 2, 99-109.

[36] Second order approximations for Adaptive estimators of regression model parameters (with Zhiejie Xiao). *Econometric Theory* 17, 984-1024.

[35] Symmetrizing and unitizing transformations for linear smoothing weights. *Computational Statistics* 16, 153-164.

[34] Estimating the Yield Curve by Kernel Smoothing Methods (with J. Nielsen, C. Tangaard, and E. Mammen). *Journal of Econometrics* 105/1 185-223.

[33] Nonparametric Factor Analysis for Residual Time Series (with J.R. Poo). *TEST* 10, 161-182.

[32] The estimation of conditional densities (with X. Chen and P. Robinson) *The Journal of Statistical Planning and Inference Special Issue in Honor of George Roussas* pp 71-84.

[31] A Nonparametric Test of Additivity in Generalized Nonparametric Regression with estimated parameters (with P. Gozalo). *Journal of Econometrics* 104, 1-48.

[30] Estimating additive nonparametric models by partial Lq Norm: The Curse of Fractionality. *Econometric Theory* 17, 1037-1050.

2000

[29] Adaptive testing in ARCH models (with D. Steigerwald). *Econometric Reviews* 19, 145-174.

[28] Efficient estimation of generalized additive nonparametric regression models. *Econometric Theory* 16, 502-523.

[27] Local nonlinear least squares estimation: Using parametric information nonparametrically (with P. Gozalo) *The Journal of Econometrics* (2000) 99, 63-106.

1999

[26] The limiting behavior of kernel estimates of the Lyapunov exponent for stochastic time series (with Yoon Whang) (1999) *The Journal of Econometrics* 91, 1-42.

[25] A computationally efficient oracle estimator for additive nonparametric regression with bootstrap confidence intervals. (with W. Kim and N. Hengartner) (1999) *The Journal of Computational and Graphical Statistics* 8, 278-297.

[24] The existence and asymptotic properties of a backfitting projection algorithm under weak conditions. (with E. Mammen and J.P. Nielsen) *The Annals of Statistics* (1999) 27, 1443-1490.

[23] A Simulation comparison between the Backfitting and Integration methods of estimating Separable Nonparametric Models (with W. Härdle and S. Sperlich). *TEST* 8, 419-458.

1998

[22] Nonparametric regression (with W. Härdle), in Samuel Kotz (ed.), *Encyclopedia of Statistical Sciences, Update Volume 2*, (1998), 470-485.

[21] An optimization interpretation of integration and backfitting estimators for separable nonparametric models (with J.P. Nielsen) *Journal of The Royal Statistical Society, Series B* (1998), **60**, 217-22.

[19] A GARCH model of the implied volatility of the Swiss market index from Option prices. (with M. Sabbatini) (1998) *The International Journal of Forecasting* 14, 199-213.

[18] A semiparametric survival model with flexible covariate effect (with P.J. Bickel and J.P. Nielsen). (1998) *The Annals of Statistics* 26, 215-241.

1997

[17] An Asymptotic expansion in the GARCH(1,1) model. *Econometric Theory*, (1997) **13**, 558-581.

[16] Efficient estimation of additive nonparametric regression models. *Biometrika*, (1997), **84**, 469-474.

[15] An analysis of transformations for additive nonparametric regression (with R. Chen, N. Wang, and W. Härdle). *Journal of The American Statistical Association* (1997) **92**, 1512-1521.

1996

[14] Estimating additive regression models with known links (with W. Härdle). *Biometrika*, (1996), **83**, 529-540.

[13] Edgeworth approximation for MINPIN estimators in semiparametric regressions models *Econometric Theory* (1996) **12**, 30-60.

[12] Second order approximation in a linear regression with heteroskedasticity of unknown form *Econometric Reviews*, (1996), **15**, 1-32.

[11] Nonparametric estimation of additive separable regression (with R. Chen, W. Härdle, and E. Severance–Lossin). In *Statistical Theory and Computational Aspects of Smoothing* Physica Verlag, (1996), p247-265.

[10] Nonparametric regression estimation at design poles and zeros (with N. Hengartner). *The Canadian Journal of Statistics*, (1996), **24**, 583-591.

1995

[9] Second order approximation in a partially linear regression model, *Econometrica* (1995) **63**, 1079-1113.

[8] Kernel estimation in a nonparametric marker dependent hazard model (with J. P. Nielsen) *The Annals of Statistics*, (1995), **23**, 1735-1748.

[7] A kernel method of estimating structured nonparametric regression based on marginal integration (with J.P. Nielsen), *Biometrika* (1995), **82**, 93-100.

[6] A simple bias reduction method for density estimation (with M.C. Jones and J.P. Nielsen), *Biometrika* (1995), **82**, 327-338.

[5] Estimation in semiparametric models: A review, in P.C.B. Phillips and G.S. Maddala (eds.), *A Volume in Honor of C.R. Rao*, Blackwell. (1995)

1994

[4] A multiplicative bias reduction method for nonparametric regression (with J.P. Nielsen), *Statistics and Probability Letters* (1994), **19**, 181-187.

[3] Applied nonparametric methods (with W. Härdle), in D.F. McFadden and R.F. Engle (eds.), *The Handbook of Econometrics*, Volume IV, (1994) pp 2295-2339, North Holland.

1993

[2] Adaptive estimation in ARCH models *Econometric Theory* (1993) **9**, 539-569.

[1] On Ultrapoverty (with S. Anand and C.J. Harris), Harvard Center for Population and Development, No. 93.02. Published in "Essays in honour of Amartya Sen", eds. Basu and Kanbur. Oxford University Press.

PROBLEMS, COMMENTS, AND BOOK REVIEWS

[1] Differentiation of the matrix exponential, *Econometric Theory*, Problem no. 94.3.2 (1994). Solution in 95 vol 11.

[2] Review of Halbert White: Estimation, Inference and Specification Analysis, *Econometric Theory* 1996, 581-583.

[3] Review of A. Ron Gallant: An Introduction to Econometric Theory, *Econometric Theory* 1998.

[4] Kernel Regression with "no" information, *Econometric Theory*, Problem no 96.2.1. (1996).

[5] Asymptotic inefficiency of an estimator derived from a Kernel-based test statistic, *Econometric Theory*, Problem no 97.1.2. (1997).

[6] Minimum distance with the L1 norm. *Econometric Theory* 1998.

[7] Review of J. Horowitz: Semiparametric Methods in Econometrics. *Journal of The American Statistical Association*

[8] Interview of T.J. Rothenberg. *Econometric Theory.*

[9] Review of A. Pagan and A. Ullah: Nonparametric Econometrics. *Journal of Statistical Planning and Inference*

[10] An exact fitting estimator in linear regression. *Econometric Theory*, 2000

[11] An Alternative GLS-like Transformation in Regression Models with AR(1) errors (with D. Kristensen.) *Econometric Theory*, 2003 19, 879-890.

[12] Comment on "An Adaptive Estimation of Dimension Reduction Space" by Y. Xia, H.Tong, and W.K. Li. *Journal of The Royal Statistical Society, Series B.*

[13] Standard Errors for the Target Variance Approach to Estimating GARCH models (with D. Kristensen.) *Econometric Theory* 2003, 19, 879-880.

[14] Review of C.F. Manski: Identification for Prediction and Decision *Economic Journal*

[15] Discussion of Y. Fan et al. *Journal of The Royal Statistical Society, Series B.* 2013

[16] Discussion of Munk et al. *Journal of The Royal Statistical Society, Series B.* 2013

REVISE AND RESUBMITS

[1] Semiparametric efficient estimation of risk measures for dynamic models under moment restrictions (with D. Shang and Y. Yan) *Journal of Financial Econometrics*

[2] An almost closed form estimator of the EGARCH model (with C. Hafner). *Econometric Theory*

[3] The Bias-Corrected Relation Between Expected Market Return and Variance, (with A. Ghosh). *Econometrics Journal*

[4] Semiparametric Model Averaging of Ultra-High Dimensional Time Series (with J. Chen, D. Li and Z. Lu) *Journal of The American Statistical Association*

WORKING PAPERS AND PAPERS UNDER REVIEW

[1] Quantile Based Characteristic factor models (S. Ma and J. Gao)

[2] Estimation of Additive Nonparametric Models with Structural Breaks (with A. Banerjee)

[3] Nonparametric Euler Equation Identification and Estimation (with A. Lewbel, S.T. Srisuma, S. Hoderlein and J.C. Escanciano)

[4] An Empirical Analysis of Circuit Breakers on the London Stock Exchange (with James Brugler)

[6] A Dynamic Semiparametric Model for Optimal Portfolio Selection (with G Connor and M. Hagmann)

[7] Efficient estimation of nonparametric regression in the presence of dynamic heterskedasticity (with Z. Xiao).

[8] An Optimal Estimator of True Mark under Double Blind Marking.

[9] Estimation of Second-price auctions and generalized competing risks models (with T. Komarova and S. Srisuma)

[10] Nonparametric endogenous censored regression with dependent data (with Ba Chu, D.T. Jacho Chavez, and Arthur Lewbel)

[11] Estimation of an infinite order nonparametric regression (with Seok Young Hong)

[12] Estimating the bid ask spread with a simple nonparametric method from the Roll model (with X. Chen, S. Schneeberger, and Y. Yi)

[13] Quantilograms under Strong dependence (with J.H. Lee and Y.J. Whang)

[14] The lower regression function and testing the expectation dependence dominance hypothesis (with Y. Whang).

[15] The effect of minimum resting times in a Glosten model (with J.P. Zigrand and E. Smetanina)

[16] Estimation of a parsimonious parametric model for large covariance matrices (with Christian Hafner and Haihan Tang)

[17] Testing stochastic dominance with many conditioning variables (with M. Seo and Y.J. Whang).

[18] Multi-step nonparametric predictive regression (with T. Cheng and J. Gao)

BOOK MANUSCRIPTS

[1] An Advanced Introduction to Probability and Statistics for Econometricians. Under contract with Elsevier, Delivery October 2016.

[2] Financial Econometrics. Under contract with Cambridge University Press, Delivery October 2017.

[3] Nonparametric Methods: Harmless Econometrics of the Unknown (with E. Mammen)