Patrick Marsh
Curriculum Vitae
April 2020

A. GENERAL

Name:	Patrick William Marsh
School:	Economics
First appointed:	01/9/2011
Current Positions:	Associate Professor in Econometrics Associate Editor, Econometric Theory, CUP. External Examiner, University of Southampton
Previous Positions:	1) ESRC Research Fellow in Econometrics 1/10/96-30/9/97 2) Leverhulme Research Fellow in Econometrics 1/10/97-30/9/99 3) Lecturer in Econometrics, University of York 1/10/99-30/9/07 4) Reader in Econometrics, University of York 1/10/07-30/8/11
Qualifications:	1) BA Economics & Econometrics, Nottingham (1991) 2) MSc Economics & Econometrics, Southampton (1993) 3) PhD in Econometrics, Southampton (1996)
PhD Supervisor:	Prof. Grant Hillier Economics Department University of Southampton
PhD Thesis:	Higher-Order Asymptotics for Econometric Estimators and Tests
Post Doctoral Supervisor:	Prof. Karim Abadir Imperial College

B. RESEARCH

Journal Publications:

1. "Saddlepoint approximations for non-central quadratic forms", (1998), *Econometric Theory,* 14, 539-559.

2. "Edgeworth expansions in Gaussian autoregression", (2001), *Statistics and Probability Letters*, 54, 233-241.

3. "Review of 'Applications of differential geometry in Econometrics' ", (with G. Forchini), (2001), *Journal of the Royal Statistical Society: Series D*, 50, no.4, p.545-547.

4. "Transformations for multivariate statistics", (2004), *Econometric Theory*, 20, 963-987.

5. "Goodness of fit tests via exponential series density estimation", (2007), *Journal of Computational Statistics and Data Analysis*, 51, 2428-2441.

6. "The available information for invariant tests of a unit root", (2007), *Econometric Theory*, 23, 684-710.

7. "Constructing Optimal Tests on a Lagged Dependent Variable", (2007), *Journal of Time Series Analysis*, 28, 723-743.

8. "A note on the geometry and power of unit root tests", (2007), *Far East Journal of Theoretical Statistics*, 22, 47-64.

9. "Unit root testing in practice dealing with uncertainty over the trend and initial condition, comment", (2009) *Econometric Theory*, 25, 637-643.

10. "The properties of Kullback-Leibler divergence for the unit root hypothesis", (2009), *Econometric Theory*, 25, 1662-1681.

11. "Conditional information in projections of Gaussian vectors", (2009), *Communications in Statistics - Theory and Methods*, 38, 332-339.

12. "Some geometry for the maximal invariant in time series regressions", (2010), *Advances and Applications in Statistical Sciences*, 1, 105-124.

13. "A Two-sample Nonparametric Likelihood Ratio Test", (2010), *Journal of Nonparametric Statistics*, 22, 1053-1065.

14. "Saddlepoint and estimated saddlepoint approximations for optimal unit root tests", (2011), *Econometric Theory*, 27, 1026-1047.

15. "A review of nonparametric statistics", (2013), *The Econometrics Journal*, 17, B1-B3.

16. "Saddlepoint Approximation for the estimator on a lagged dependent variable", (2013), *Advances and Applications in Statistics*, 36, 105-118.

17. "Nonparametric series density estimation and testing", (2019), *Statistical Methods and Applications (Journal of the Italian Statistical Society)* 28, 77–99.

18. "The role of information in nonstationary regression", (2019), *Statistics,* 53, 656–672.

19. "Properties of the power envelope for tests against both stationary and explosive alternatives: the effect of trends", (2020), *Journal of Time Series Analysis*, 41, 146-153.

Other Papers

20. "Exact inference for the unit root hypothesis" (with G. Forchini), University of York, Department of Economics DP 00/54.

21. "Saddlepoint approximations in non-stationary time series", University of York, Department of Economics DP 00/57.

22. "Non-parametric likelihood ratio tests", University of York, Department of Economics DP 00/56.

23. "Data driven likelihood ratio tests for goodness-of-fit with estimated parameters", University of York, Department of Economics DP 06/20.

24. "Hausman type tests for nonparametric likelihood"; https://www.nottingham.ac.uk/research/

25. "Nonparametric conditional density specification testing and quantile estimation; with application to S&P500 returns":

https://www.nottingham.ac.uk/research/groups/grangercentre/publication/1902.aspx

In progress

26. "Bootstrap saddlepoint tests of a unit root".

27. "The Effects of Detrending on Gaussian Quasi-Likelihood Unit Root Inference".

28. "Hindcast predictive density specification testing and forecast improvement"

29. "Asymptotically pivotal tests for trading rule signals with application to nonparametric quantile based trading rules"

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Research funding

1. Oct. 1993 to Sept. 1996, ESRC studentship, award no. R00429334218.

2. Oct. 1995 to Sept. 1996, British Council, 'Improved Techniques of Asymptotic Testing for Structure and Orthogonality in Economic Models' (Joint with Dr. J. Podivinsky and Prof. G. Hillier and the Business School, University of Athens).

3. Oct. 1996 to Sept. 1997, ESRC research fellowship, award no. R000236627, supervised by Prof. K. Abadir.

4. Oct. 1997 to Sept. 1999, Leverhulme Special Research Fellow in Mathematics and Economics, "Improved Asymptotics for Econometric Estimators and Tests".

5. Oct. 2005 to Sept. 2006, Anniversary Lecturer in Econometrics, University of York research leave award.

Research Students

(i) Supervision

1. Angelica Gonzalez (October 2005), “Econometric Applications of Empirical Likelihood”, University of York.

2. Liqiong Wang (October 2011), “Essays on the sensitivity of time series unit root tests and prediction to the specification of the deterministic component and error autocorrelation”, University of York.

3. Donneil Cain (January 2017), “The Gravity Model of International Trade: Econometric properties and applications”, University of Nottingham. Co-supervised with Dr Eberhardt.

4. Abrams, Mbu Enow Tagem (July 2018), “Essays on aid allocation and effectiveness in developing countries”, University of Nottingham. Co-supervised with Dr Appleton.

(ii) Examination

1. Jie Zhou (2008), “Managerial Overconfidence and Corporate Policy Decisions in UK Companies”, award of PhD in Economics, University of York.

2. Federico Crudu (2009), “Essays on Generaliuzed Empirical Likelihood and Time Series”, award of PhD in Economics, University of York.

3. Sam Astill (2013), “Robust tests for time series econometrics” award of PhD in Economics, University of Nottingham.

4. Emily Whitehouse (2019) “Robust Methods in Univariate Time Series Models”, award of PhD in Economics, University of Nottingham.

Editorships and other research activities

1. Associate Editor, Econometric Theory.

2. Seminars presented at the Universities of Amsterdam, Birmingham, Cambridge, Exeter, Manchester, Nottingham, Southampton, Surrey, York, Queen Mary and Westfield College and the L.S.E.

3. Invited talks; “Differential Geometry in Econometrics”, at the European University in Florence, Italy (1997); “Bootstrap Nonparametric Likelihood Ratio tests for Goodness of Fit with Estimated Parameters”, Tinbergen Institute Econometrics Seminar, Amsterdam (2012).

4. Papers presented at the 7^{th} World congress of the Econometric Society, Tokyo, Japan (1995), and the ESRC Study group meetings in Bristol, U.K. (1998, 2000, 2001, 2004 and 2007) and EC^2 meeting, Dublin, Ireland.

5. Referee for Econometrica, the Journal of Econometrics, Econometric Theory, the Econometrics Journal, the Journal of Computational Statistics and Data Analysis, the Journal of Health Economics, Econometric Reviews, Entropy, and the Cambridge University Press (Economics Section).

Scholarly Awards

1. Econometric Theory Multa Scripsit Award (2009).
2. Econometric Theory Plura Scripsit Award (2012).

C. TEACHING

Lecture courses and evaluations

York:

1. Quantitative Economics (1994-1996) postgraduate Masters level course for Department of Economics, University of Southampton.

2. Quantitative Methods (1994-1996) postgraduate Masters level course for Department of Economics, University of Southampton.

3. Further Topics in Econometrics, (1995-1996) postgraduate Masters level course for Department of Economics, University of Southampton.

4. Statistical Theory 1 (1997-2001) 2^{nd} year undergraduate level course for Department of Mathematics, University of York. Average evaluation, 3.8/5.

5. Introductory Econometrics (1998) postgraduate Masters level course for Department of Economics, University of York. Average evaluation, 3.7/5.

6. Advanced Econometrics (2000-2005) postgraduate Masters level course for Department of Economics, University of York. Average evaluation, 4.3/5.

7. Introductory Statistics (2001-2005) 1^{st} year undergraduate level course for Department of Mathematics, University of York. Average evaluation, 4.0/5.

8. Time Series 1 (2003-2005) postgraduate Masters level course for Department of Economics, University of York. Average evaluation, 4.0/5.

9. Advanced Econometrics (2006-2008) postgraduate Masters level course for Department of Economics, University of York. Average evaluation, 4.1/5.

10. Econometric Theory (2006-) 2^{nd} year undergraduate level course for Department of Economics, University of York. Average evaluation, 4.6/5.

11. Introduction to Statistical Theory (2009-2011) 1st year undergraduate level course for Department of Economics, University of York. Average evaluation, 3.8/5.

Nottingham:

12. Econometric Theory (2011-) postgraduate masters level course for School of Economics, University of Nottingham.

13. Introductory Econometrics (2012-) 1^{st} year undergraduate level course for School of Economics, University of Nottingham.

14. Advanced Time Series Econometrics (2013-2018) 3^{rd} year undergraduate level course for School of Economics, University of Nottingham.

15. Advanced Econometric Theory (2018-) 3rd year undergraduate level course for School of Economics, University of Nottingham.

Other teaching distinctions

In 2001 I was awarded the Departmental teaching prize, awarded to the Lecturer with the highest overall student evaluation in the Economics department at the University of York.

D. ADMINISTRATION AND MANAGEMENT

Departmental/School administrative posts

York:

1. Admissions tutor for BSc in Economics and Econometrics (1997-1999).
2. Member of the Mathematics with Statistics board of Examiners (1997-2001).
3. Admissions tutor for the MSc in Econometrics and Economics (1998-2002).
4. Member of Economics Department Teaching Committee (1999-2001).
5. Director of the MSc in Econometrics and Economics (2001-2002).
6. Admissions tutor and co-director for the MSc in Finance and Econometrics (2003-2005).
7. Economics Part II Examinations marks collation coordinator (1999-2005).
8. Economics Department staff appraiser (2000-2001).
9. Economics Department Chief Examinations Officer (2001-2006).
10. Member of Economics Department Research Committee (2003-2005, 2006-2008).
11. Economics Chair of Board of Examiners (2004-2006).
12. Chair, Combined Board of Studies, Joint Degrees in Mathematics and Economics (2006-2011).
13. Programme director, undergraduate Econometrics.
14. Member of Economics Department Teaching Committee.

Nottingham:

15. Second year director of studies (2011-2017)
16. Seminar organizer for Granger Centre for Time Series Econometrics (2011-)
17. Economics liaison for Mathematics and Economics BSc (2013-2017)
18. Member of School of Economics Undergraduate Teaching Committee
19. School Examinations Officer
20. Chair, Examinations Committee
21. Chair, Extenuating Circumstances Panel

Other administrative posts

York:

1. Organizer of the Statistics and Econometrics seminar series for York Statistics Group (1997-1999).

2. Member of the Vice-Chancellor's young staff forum (1999-2001).

Nottingham:

3. Member of peer review college for research grant applications to AHRC and ESRC (2012-2017).

4. Member of Q-Step Faculty committee (2015-2017).

Bristol

5. External Examiner for the University of Bristol, undergraduate programmes in the School of Finance, Economics and Management (2010-2014)

6. External Examiner for the University of Southampton, undergraduate and postgraduate programmes in the Department of Economics (2015-2020)