

CURRICULUM VITAE

Mark SALMON

Employment:

- 2004- Professor of Finance, University of Warwick
- Director of the Financial Econometrics Research and Warwick Finance Research Institute
- 2000- Consultant to the Bank of England
- 1997-2003 Deutsche Morgan Grenfell Professor of Financial Markets,
Cass Business School
- Director of the Financial Econometrics Research Centre 1998-
 - Director of the MSc. In Finance, Economics and Econometrics
- 1989- 1997 Professor of Economics, European University Institute, Florence
- Chairman of Economics Department, 1993 -- 1995
 - Director of the Global Warming Policy Analysis Research Project within the European Policy Unit, 1990-1992.
- 1979- 89 Lecturer /Senior Lecturer, Department of Economics, University of Warwick.
- 1976-79 Research Fellow, Australian National University. Centre for Resource and Environmental Studies, Australia.
- 1974-76 Economic Section, Bank of England.
- 1973-74 Commodities Research Unit Ltd., London.
- 1971-73 Research Officer, Econometric Forecasting Unit, London Business School.

Visiting Appointments:

- 1984-85 Visiting Professor, Department of Economics, Princeton University, U.S.A.
- 1987 Spring Visiting Professor, University of Illinois at Champaign Urbana.
- 1987-8 Visiting Fellow, Nuffield College, Oxford
- 1988,90,2001 Professeur invité, GREQAM, Université d'Aix-Marseille II et III
- 1992 Visiting Professor, Université Paris I, Sorbonne
- 1996-2003 Professeur invité, Université Montesquieu- Bordeaux IV
- 1997- External Professor, European University Institute, Florence

Short Courses:

- Oxford* 1987: Aspects of Conditional Inference in Econometrics
- Aix Marseille*, 1988: Issues in Dynamic Game Theory
- Aix Marseille*, 1990: Credibility and the Influence of Learning on Macroeconomic Policy

Université Paris I, Sorbonne; 1993: Bounded Rationality and Macroeconomic Policy
Université Montesquieu- Bordeaux IV, 1996, Dynamic Econometrics.
European Economics Association Summer School, Computational Methods in Economics,
 1996.
Université Montesquieu- Bordeaux IV, 1997, 1998,1999, 2000 Financial Econometrics.

Other Professional Activities

- Advisor to the Bank of England 2000-
- Research Fellow of the Centre for Economic Policy Research, (CEPR), London attached to the International Macroeconomics program and the Finance Program, renewed three times.
- Director of the Global Warming Policy Analysis Research Group, (funded by DGXI of the European Commission)
- Co-proposer for the E.S.R.C. Macro Modelling Bureau at Warwick.
- Academic Consultant to the Parliamentary Policy Unit (1986) and Specialist Adviser to the House of Commons Select Committee on the Treasury and the Civil Service, 1986.
- Member of the program committee European Economic Association Annual Congress in Helsinki. 1993, European Econometric Society Meetings,2001,2002,2003
- Member of the Scientific Committee for; Neural Approaches in Economics and Management, 2nd International Meeting ANSEG, Poitiers , September 1995.
- Member of the Scientific Committee for; Théories et Méthodes de la Macroéconomie, Paris 1996
- Consultant to Deutsche Bank, London 1997-99, Deutsche Asset Management 2001
- Member of “Task Force” set up by DGII of the European Commission to consider “The Future Exchange Rate policy for the EURO” and contributor to the written report with same title. 1997.
- Consultant to Hungarian National Bank on ACE project: development of policies aimed towards EU membership. 1997.
- I have participated in a range of professional consultancy activities with topics ranging from The Demand for Tufted and Woven Carpets in the UK; to Long Term Planning of the Saudi-Arabian Economy.
- Advances in Finance invited speaker, twice, Merrill Lynch.

Conference Organisation

Spring 1989: ESRC Econometrics Study Group Conference, Warwick

Spring 1990: Anglo-French Recent Advances in Econometrics Meeting. for CEPR. Paris

Autumn 1990: *Rational Behaviour and Aggregation Theory* (jointly with A.Kirman) at EUI.

Summer 1991: *Learning and Rationality in Economics*,(jointly with A.Kirman) at EUI.

Summer 1992: *Non-linear Dynamics in Economics*, (jointly with David Rand and Robert McKay, Department of Mathematics, University of Warwick) at EUI.

Summer 1994: *Economic Issues facing Europe*, in collaboration with the Robert Schuman Centre, European University Institute.

Autumn 1996: *Differential Geometry and Econometrics; Theory and Computation*, European University Institute.

- March 1998, Co-organiser of a CEPR/ESRC/IFR Finance Network Workshop on Financial Econometrics, at Flemings London.
- March 1998 : *Banking and Currency Crises in East Asia and Central Europe*, jointly with the Money Macro Study Group , at CUBS
- May 1998: *One day Workshop on Financial Econometrics* , at CUBS
- December 1998: *Gauss and Finance*- one day seminar at CUBS
- March 1999: *Robust Statistical Methods in Finance* , at CUBS
- December 1999: *Robust Decision Theory in Economics and Finance*, with funding from the ESRC and The Bank of England, at City University Business School
- Spring 2002: *Knightian Uncertainty and Financial Markets*, with ESRC MMF Study Group
- Spring 2002: *Risk Management: Issues at the interface of Finance and Macro Economics* with the ESRC. Money Macro Finance Group
- June 2002: *Applications of Copulae in Finance*, at Cass.
- March 2003: *Performance Measurement and Persistence*, at Cass, Joint with Investment Management Association.
- June 2004: *Macro factors and the Yield Curve*, MMF/FERC Bank of England

Research Grants

- 1984** The E.S.R.C. Macro Modelling Bureau at Warwick, (co-proposer with K.F. Wallis for the original grant)
- 1987** Nuffield Foundation:, a small grant to provide assistance for the preparation of material for *Strategic Behaviour in Macroeconomics* a draft book.
- 1988-90** NATO (Collaborative Research Grant) : The development of stochastic control and game theory for decision making in Economics: Rational expectations models and policy, (with Prof. Tamer Basar, University of Illinois)
- 1989** Economic and Social Research Council, Applications of Differential Geometry to Econometrics, (with Dr. F. Critchley, Department of Statistics, Warwick)
- 1990-91** Economic and Social Research Council , Geodesic Inference, Encompassing and Preferred Point geometries in Econometrics, (with Dr. F. Critchley, Department of Statistics, Warwick)
- 1990-91** SPES grant from the European Commission for *European Workshops in Econometrics and Economic Theory*. (in association with Alan Kirman, EUI., Charles Wyplosz, INSEAD and CEPR, London)
- 1991- 93** Grant of 150,000 Ecu from DGXI of the European Commission for a study of *Policy responses to Global Climatic Change* at the European University Institute , Florence.
- 1992-93** SPES grant from the European Commission for *European Workshops in Econometrics and Economic Theory*. (30,000 Ecu) continuation of previous grant)

- 1994-5** Human Capital Mobility Grant, with H. Van Dijk, C.Gourieroux, G.Mizon and others on *Econometric Methods and Simulation Methodology*,
- 1989-97** Grants of 310 million Lire (£ 130,000) from The Research Council of the European University Institute for projects on Econometric Inference, Behaviour in Financial Markets and Bounded Rationality.
- 1997-1999** ACE Project with Marcus Miller, Axel Weber and Paul Soderlund and Hungarian collaborators to provide advice on macro economic policies directed towards Hungarian membership of EU.
- 1997** Grant of £120,000 for the establishment of the Financial Econometrics Research Centre at the City University Business School from various sources through City University Business School.
- 1999-2002** ESRC £93,000 Research Award in Evolving Macro Economy Programme: Robust Decision Theory and the design of Economic Policy: Applications of H infinity Theory to Economics and Finance.

Grant applications currently being prepared for EU support (£1,250,000); The behaviour of very large complex systems research programme: Heterogeneous agent models of financial markets and three proposals being submitted to EPSRC, (1) Loss Aversion in Finance (2) Knightian Uncertainty and Asset Pricing (3) Measuring Market Sentiment- with Soosung Hwang and Gordon Gemmill. One application being prepared for ESRC with Roel Oomen (Warwick) on Modelling transactions level data.

Publications

Book

Financial Econometrics: Theory, Methods and Application, Cambridge University Press, (forthcoming.) A post-graduate/ research text.

Monograph

The Analysis of Commodity Markets for Policy Purposes, Trade Policy Research Centre, London, 1978, (with S.Harris and B.Smith)

Edited Volumes

International Economic Policy Co-ordination, Basil Blackwell, 1991, (with C.Carraro, D. Laussel and A. Soubeyran) and editor's introduction

Learning and Rationality in Economics, Basil Blackwell, 1995, (with A.Kirman), together with editor's introduction.

Nonlinear Dynamics in Economics, Cambridge University Press, 1997,

(with W. Barnett, A. Kirman).

The Application of Differential Geometry to Econometrics, Cambridge University Press, 2001. (with Paul Marriott)

Robust Decision Theory in Economics and Finance, Cambridge University Press. forthcoming

Papers Published and Forthcoming

Macroeconomics/Financial Markets

Dynamic games and the time inconsistency of optimal policy in open economies, *Economic Journal*, vol. 95, pps 124-137, (1985) (with M.H.Miller).

Dynamic games and time consistent policy in open economies, in *International Policy Co-ordination*, NBER/CEPR edited by W. Buiter and R. Marston, CUP, pp 184-213, (1985) (with M.H.Miller).

The principle of effective demand revisited, *Journal of Economic Dynamics and Control*, 10, pps 231-237, (1986)

On the convergence of beliefs and policy to a rational expectations equilibrium in a dual policy problem, in *Monetary Theory and Policy*, eds W. Marois, A. Soubeyran and D. Laussel, Springer Verlag, (1988). (with T.Basar).

When does co-operation pay ?, *Journal of Economic Dynamics and Control*, vol. 14, no.3/4, pps 553-570, (1990) (with M.Miller)

Time consistency, discounting and the returns to co-operation, in *International Economic Policy Co-ordination*, edited by Carraro, Laussel, Salmon and Soubeyran (1991).(with M.Miller and A. Sutherland)

Credibility and the value of information transmission, in a model of monetary policy and inflation , *Journal of Economic Dynamics and Control*, vol. 14, no.1, pps 97-116, (1990) (with T. Basar)

Inflation and the evolution of credibility with disparate expectations, (with Tamer Basar), *Dynamic Modelling and Control of National Economies*, edited by N.M.Christodoulakis, Pergamon Press, 1989.

Nonlinearity and Exchange Rate Dynamics, (with P. Guarda) Invited paper for Special Issue of *Cuardenos Economicos* on Exchange Rates and Foreign Exchange Markets, 1993.

On the Detection of Nonlinearity in Foreign Exchange Data (with P.Guarda), in *Nonlinear Dynamics in Economics*, Cambridge University Press, (edited by W. Barnett, A. Kirman and M. Salmon) 1996

Bounded Rationality and Learning: Procedural Learning, in *Learning and Rationality in Economics* , B. Blackwell, (edited by A.Kirman and M.Salmon), 1995

On the Nature of Commitment in Flexible Target Zones and the Measurement of Credibility; the 1993 ERM Crisis , *European Currency Crises and After*, edited by E. Girardin and J.Melitz, Manchester University Press, 1995.

Some Evidence for Nonlinearity in the First Moment of Foreign Exchange Data, (with Paolo Guarda) in *Intégration Financiere internationale, Régionalisation des system financiers et performances macroeconomiques*. Commissariat

- Général Du Plan, Document De Recherche, E.Girardin (editor). (1997)
How Many Currencies Does the World Need? Currency Crises and the Euro, *City Business*, Spring 1999.
- Robust Decision Theory and the Lucas Critique, *Macroeconomic Dynamics*, (2002) with Massimiliano Marcellino.
- Editor's introduction to the Special Issue of *Macroeconomic Dynamics* on Robust Decision Theory, 6,1, Feb (2002)
- Robust Dynamic Currency Hedging Strategies, forthcoming *Robust Decision Theory in Economics and Finance*, Cambridge University Press, (2002) with Paul Weller.
- On the Theoretical Irrelevance of the Lucas Critique, forthcoming in *Robust Decision Theory in Economics and Finance*,(2002), Cambridge University Press, with Massimiliano Marcellino.
- An Analysis of Performance Measures using Copulae, (2003) in *Performance Measurement*, edited by John Knight and Steve Satchell, Heinemann
- Robust Inflation Targetting , forthcoming *Robust Decision Theory in Economics and Finance*, Cambridge University Press,(with Juha Kilponen)
- Model Misspecification, Robustness and Monetary Policy, with Juha Kilponen, forthcoming in *Volume in honour of Alan Walters*, edited by Mathews and Minford, Edward Elgar.(2003)
- A Public Choice Perspective on European Monetary Union, Discussion of paper by Roland Vaubel in *Currency Unions: Theory, History, Public Choice*, (edited by G. Wood and F. H.Capie), Routledge.

Econometrics/Financial Econometrics

- Estimation problems in large scale econometric models: an application of various estimation techniques to the London Business School model. In *Modelling the Economy* (G.A. Renton Ed.) Macmillan, pps 323-348, 1974. (with J.R. Eaton)
- Control methods and quantitative economic policy. In *Optimal Control for Econometric Models* (S.Holly, B. Rustem and M.B. Zarrop, eds.), Macmillan, pps 74-105, 1978, (with P.C. Young)
- Nonlinearity in large macroeconometric models. In *Simulation modelling, techniques and applications*, P.R.Benyon ed., ANU press, Canberra, pps 13-19, 1978
- Model validation and forecast comparisons: theoretical and practical considerations. In *Evaluating the reliability of Macroeconomic Models*, (G.C. Chow and P. Corsi, eds.) Wiley, pps 219-245, 1982, (with K.F. Wallis)
- Error Correction Mechanisms. *Economic Journal*, vol. 92, pps 615-629, (1982)
- Testing Normality in Econometric Models, *Economic Letters*, vol. 11, pps 123-127, 1983, (with N.Keifer)
- On Evaluating the Importance of Non-linearity in Large Macro-econometric Models, *International Economic Review*, Nov., pps 625- 646, (1986), (with P. Fisher)
- Error Correction Models, Co-integration and the Internal Model Principle, *Journal of Economic Dynamics and Control*, 12, 2/3, 523-551, (1988).
- Distances in Statistics, (with F.Critchley and P.Marriott), Italian Statistical Society, April 1993 (invited paper, subsequently published in proceedings volume)
- Preferred Point Geometry and Statistical Manifolds, (with F.Critchley and P.Marriott), *The*

- Annals of Statistics*, 1993, Vol 21, No.3, pps 1197-1224.
- Preferred Point Geometry and the local differential geometry of the Kullback-Leibler divergence, (with F.Critchley and P.Marriott), *The Annals of Statistics*. Septmeber, 1994.
- On the Differential Geometry of the Wald Test with non-linear restrictions (with F.Critchley and P.Marriott), *Econometrica* , September, 1996.
- Polynomial Cointegrated Systems and their Representations; A Synthesis, (with Niels Haldrup) *Journal of Econometrics*, 1998
- An Introduction to the Tools of Differential Geometry and their application to Econometrics, part I of *Applications of Differential Geometry to Econometrics*, eds P.Marriott and M. Salmon, Cambridge University Press, 2000
- Parameterisations and Transformations; An Elementary Introduction to Amari's Differential Geometry,(with F.Critchley and P.Marriott), in *Applications of Differential Geometry to Econometrics*, eds P.Marriott and M. Salmon, Cambridge University Press, 2000
- On Preferred Point Geometry in Statistics, *Journal of Statistical Planning and Inference*. invited for special issue in honour of C.R Rao, 102 (2) (2002) pp. 229-245, (with Paul Marriott and Frank Critchley)
- Market Stress and Herding, (with Soosung Hwang), forthcoming Journal of Empirical Finance, 2004.

Currently Submitted papers

- A New Measure of Herding* (with Soosung Hwang) (in process of being submitted to Jnl of Finance)
- Dynamic Copula Quantile Regressions and Tail Area Dynamic Dependence in Forex Markets*, (Submitted to Journal of Financial Econometrics)
- Investigating Dynamic Dependence using Copulae*, (with Eric Bouye and Nicolas Gaussel) (Revise and resubmit decision from Journal of Time Series Analysis) revision in progress
- Intrinsic Stationarity: investigating predictability in transactions level FOREX data* (with Robert Hillman), (in process of being submitted to Quantitative Finance)
- Is the Monetary Policy Committee Robust?* (Submitted to Economic Journal) with Juha Kilponen

Research in various stages of completion

My main research interests lie in the area of financial econometrics and the econometric analysis of transactions level data, behavioural finance, Knightian uncertainty and robust decision making in finance in particular.

Recent Developments in Financial Econometrics ; presented as plenary address to Canadian Economics Association (2001)

Knightian Uncertainty and Option Pricing (with Steve Weston)

Liquidity in a Limit Order Book Foreign Exchange Trading System (with Ian Marsh and Robert Hillman.)

Markov Switching Based Transaction Time Models in Forex(with Robert Hillman)

Liquidity risk in FX transactions data (with Ian Marsh and Robert Hillman.)

On the use of encompassing tests to discriminate between empirical copulae,

On measuring the dependence between non-gaussian returns in finance.(with Eric Bouye)

Looking for Structure in a Near Random Walk; a Comparison of LWR and Gated Neural Networks with Application to the DM/\$ Exchange Rate (with Robert Hillman)

On the Evolution of Credibility and Flexible Target Zones, (with R. Avesani and G-M. Gallo),

Copula quantile regression, (with Eric Bouye) presented at Extremes Conference in Montreal Sept 2002.

Statistical inference for implied pdf's, (with Daniel Giamouridis)

Do hedge funds protect against downside risk?, (with Harry Kat),

A New Measure of Herding; Applications to the UK, US and Korean Markets, with Soosung Hwang, (included in top ten recent download lists on SSRN in the areas; Emerging Markets, Behavioural Finance and Behavioural and Experimental Finance.

Performance Measurement in a Loss Aversion World, with Gordon Gemmill and Soosung Hwang

Do Hedge Funds provide Downside protection? , with Harry Kat.

Performance Measure Aggregation using Copulae (with Soosung Hwang),

Emerging Market Currency Risk: an application of Copula Quantile Regression, with Eric Bouye,

Behavioural Thresholds and Nonlinearity around Arbitrage conditions,

Knightian Uncertainty and Asset Pricing (with Ben Martin),

The Implied Copula: Calibration to triangular FX rates, with Nick Webber

Is there one market time in the Foreign Exchange market, with Marwan Izzeldin.

Liquidity in a Limit Order Book Foreign Exchange Trading System (with Ian Marsh and Robert Hillman.)

Dynamic Models of Liquidity Risk in FX Transactions Data (with Ian Marsh and Robert Hillman.)

Bubbles in Housing Markets,

The Econometrics of Copula Functions, presented in Bologna September 2004, Frontiers in Financial Markets Mathematics Summer School

I have also written a number of book reviews.

Unpublished Papers and Official Reports

Optimal control and economic dynamics: an investigation of co-ordinated and decentralised policy formation in a multicountry setting with flexible exchange rates, *The House of Commons Treasury and Civil Service Committee enquiry into International Monetary Arrangements*, Dec 1982 (with M.H.Miller).

Global Climate Change Policies: Economic and Political Feasibility. *Report to Directorate General XI of the European Commission, June 1992.*

Evaluating Policy analysis of the Greenhouse Effect. *Report to Directorate General XI of the European Commission, September 1992.*

Modelling optimising behaviour in the absence of an 'optimal' theory. Paper prepared for *H.M. Treasury Academic panel.*, 1984

Rational consumption behaviour. (1984) :

On the detection of multiple solutions to nonlinear econometric models.

On testing theories of disequilibrium behaviour when the equilibrium is unobserved, (with P. Hartley), 1985. (An early model of error correction behaviour within a monetary policy model)

Options for the Future Exchange Rate Policy for the EURO, Report drawn up for DGII of the European Commission , (member of a group that helped draft the final report).

Books and Research Monographs in preparation :

***1. Financial Econometrics: A Graduate Text* (forthcoming CUP)**

A text on Financial Econometrics emphasising econometric techniques but with practical applications to empirical finance as a principle objective. This has been used and developed for graduate teaching over the last 7 years.

- 1) Stylised Facts of Financial Returns
- 2) Measuring Dependence; Copula and Correlation
- 3) Volatility Modelling: Realised Volatility
- 4) Measuring higher moments and beyond mean variance.
- 5) Expected Shortfall and Value at Risk: Coherent Measures of Risk
- 6) Extreme Value Theory
- 7) Forecasting with Asymmetric Loss Functions: Density Forecasting
- 8) Predictability and its Economic Significance
- 9) Long memory and Regimes in Financial Data
- 10) Inferring information from Financial Markets; Implied Risk Neutral Densities
- 11) Econometrics of Fixed Income
- 12) Modelling Default Risk and Credit Spreads
- 13) Non-parametric methods in finance
- 14) High Frequency Econometrics and Market Micro Structure

Appendix: A Rapid review of Econometric Methods: Asymptotic properties and inference of:- Maximum Likelihood, Pseudo MLE, Method of Moments, Efficient MoM, M-Estimators, Simulation MLE (Indirect Estimation), Simulated Method of Moments, Non Parametric and Semi Parametric Methods, Bootstrap Methods, Bayesian Methods, Monte Carlo Markov Chain, MCMC

2. *An Introduction to Financial Econometrics*(contract with Wiley for delivery in January 2005) with Soosung Hwang

An Undergraduate or non-specialist Master's level text book which takes students with little or no background to good undergraduate level of econometrics using financial applications and data as the learning medium. A complete draft exists but it needs to be worked on further.

Current Research Interests

- Financial market theory and empirics; in particular
 - Analysis of transactions level data
 - measuring dependence using copulae
 - dynamic hedging against extreme risk,
 - extreme value theory and coherent measures of risk,
 - time deformation and information flow and volatility,
 - nonparametric asset pricing and option theory.
 - uses of implied state price densities in pricing and policy
- Behavioural Finance
- Robust dynamic decision theory , H^∞ control theory, applications to Finance and Economic Theory.
- The use of mixtures models in finance
- Conditional inference in econometrics: the role of ancillarity.
- Information processing by economic agents; learning ,qualitative decision theory, approximate reasoning and bounded rationality in financial markets.

Contributions to scientific meetings and seminars

I average about 15 conferences/seminar presentations each year. Recent Presentations include The Financial Markets Group (twice) London School of Economics, Cambridge University (twice), York University, The Bank of England (4 times), The European Econometric Society Meetings at Santiago di Compostelo. University of Singapore, University of Siena, EC² Financial Econometrics Conference, Madrid., Tel Aviv University, Invited Speaker Financial Econometrics Conference in New York., Invited Speaker EFMA meetings Lugano, Invited plenary Speaker: The State of the Art Lecture to the Canadian Economics Association- Recent Developments in Financial Econometrics, Montreal May 2001, Evolving Macro Economy Conferences at the Bank of England and Warwick, CCBS Meeting on Foreign Exchange Markets, invited speaker at FMG conference on Empirical Finance 2002, Newton Institute Cambridge, Risk and Uncertainty in Finance, Banca D'Italia, Extremes in Finance, Montreal, Invited Plenary Speaker WEHIA 2003, Kiel,

Invited Plenary Speaker, Italian Statistical Society meeting in Bressanone on Nonlinear Time Series 2003, Nuffield College, Oxford, Said Business School, invited speaker at London ASTIN Meeting 2003, invited speaker Merrill Lynch Advances in Finance.

Various Computer Programmes

- PSTAB** A general econometric estimation package with emphasis on recursive stability analysis and influence.
- SLIM** A package for the solution and analysis of large scale econometric models (with Paul Fisher)
- UPDATE** A program for the management of time series data
- MARK2** A program for the solution of differential games by Pontryagin methods. (An update of SADPNT by Austin and Buiters).

A range of routines/ programs in *Matlab*, *Mathematica* and *S Plus* for particular problems involving Neural networks and learning, Differential Geometry and calculation of geodesics, simulation of exchange rate target zones, risk sensitive decision making and high frequency econometrics and financial econometrics in general. Familiar with Fortran and C++ higher level languages apart from *Matlab*, *Mathematica* and *S-Plus*; Unix, DOS/WINDOWS and Mac operating systems. I have served as a member of an “advisory board” to Mathsoft in the development of the Finometrics module of SPLUS. I will be giving a short course on using SPLUS and Financial Econometrics in London in June 2004 and October 2004..

Editorial/Refereeing:

Associate Editor and Special Issues Editor: *Macroeconomic Dynamics*

Editor of Special Issue of *Macroeconomic Dynamics* on Robustness in Finance and Economics, 2002.

Associate Editor of the *Journal of Financial Econometrics*, Kluwer first issue 2003.

Standard service for a number of journals, including recently;

Econometrica, *Journal of Economic Dynamics and Control*, *Review of Economic Studies*, *Journal of Public Economics*, *Economica*, *The Economic Journal*, *Journal of Econometrics*, *Journal of Applied Econometrics*, *The European Economic Review*, *Canadian Journal of Economics*, *The Econometrics Journal*, *Journal of Time Series Analysis*, *Jnl Empirical Finance*.

Grant reviews for

National Science Foundation
Economic and Social Research Council
Canadian SSRC

Book Reports for Cambridge University Press, Blackwells, Manchester University Press, Oxford University Press.

Teaching:

M.A.Program at Warwick

Econometric Theory
Applied Econometrics
Optimising models in Macroeconomics
Time Series Analysis

Undergraduate Courses at Warwick

Econometrics II
Topics in Applied Econometrics
Quantitative Methods I
Quantitative Methods II
Techniques for Mathematical Economics and Econometrics
Economic Statistics

Princeton: Graduate courses in the Econometrics Program;

Optimisation and Policy
Econometrics: Conditional inference; influence analysis and outliers

Illinois:

Graduate option: Optimising models in macroeconomics
Undergraduate: Introductory Econometrics

The European University Institute:

Graduate (Phd) courses:

Advanced Topics in Macroeconomics
Theory of Applied Econometrics
Open Economy Macroeconomics
Econometric Theory
Research seminar in Econometrics
Research workshop in Macroeconomics
International Monetary Economics
New Approaches to Macroeconomic Stabilisation Policy

Applications of Differential Geometry to Econometrics ; Inference in Curved
Econometric Models;
Financial Econometrics

Cass Business School

Financial Econometrics (MSc. in Finance)
Advanced Financial Econometrics (Phd Programme)
Advanced Financial Modelling and Forecasting (MSc. in Mathematical Trading and Finance)
International Finance (MBA in Finance)
Macroeconomics for Financial Markets (MSc Finance, Economics and Econometrics)
Market Microstructure and the Econometrics of High Frequency Financial Data (MSc. In Finance, Economics and Econometrics)
Behavioural Finance and Market Psychology, (MSc. In Finance, Economics and Econometrics,)
Advanced Econometric Analysis of Financial Markets , (MSc. In Finance, Economics and Econometrics,)
Computational Finance, (MSc. In Finance, Economics and Econometrics, and Phd Programme)
Advanced Applied International Finance (MSc Finance, Economics and Econometrics)
Financial Econometrics (MSc. Banking and International Finance)

Ph.D. Supervision

I co-supervised three Phd students through to completion while in the Economics Department at Warwick University (to 1989) including **Alistair Hall** (North Carolina) and **Paul Turner** (University of Sheffield) and have supervised or co-supervised the following students more recently at the EUI and CASS;

EUI:

CESAR Herman	Defended	29/11/93	World Bank
The Comedy and the Tragedy of the Commons: Control and Game Models of Economic Policy regarding the Greenhouse Effect			
ALBEROLA ILA Enrique	Defended	15/9/95	Bank of Spain
Exchange Rate Targets: Models and Design			
PELLONI Alessandra	Defended	17/11/95	University of Manchester
Essays in Growth and Hysteresis			
UBIDE QUEROL Angel	Defended	27/11/95	IMF

On International Business Cycles

- BOSCO Luigi** Defended 26/1/96 **University of Bergamo**
Essays on Policy Coordination
- HOPKINS Edmund** Defended 4/3/96 **University of Edinburgh**
Essays on Learning and Evolution
- HASEKAMP Pieter** Defended 29/3/96 **Dutch Finance Ministry**
Essays on the Credibility of Economic Policy
- HERRENDORF Berthold** Defended 23/5/96 **University of Warwick**
Solutions to the Time Consistency Problem of Optimal Monetary Policy
- ROBERTS Melanie** Defended 9/10/97 **Cycle Tours in Tuscany!**
Active Learning Under Uncertainty: the Case of Monopoly Experimentation
- DELLA POSTA Pompeo** Defended 13/10/97 **University of Pisa**
Fiscal Convergence, Expectations and Speculative Attacks in the European Monetary System
- KOHLER Marion** Defended 17/11/97 **Bank of England**
Coalitions in International Policy Games: Currency Blocs and Trade Blocs
- GUARDA Paolo** Defended 17/2/98 **European Investment Bank**
Some Nonlinear Approaches to Exchange Rates
- SCULLY Jimmy**
Applications of Differential Geometry to Econometric Inference : Conditional Unit Root Testing
- TORRES CHACON José** **Submitted in Spain**
Essays in Exchange Rate Target Zones
- ORTEGA Eva** Defended 13/2/98 **Bank of Spain**
Evaluating Multivariate Dynamic Models with Application to Calibrated and Simulated Business Cycle Models
- KILPONEN Juha Kristian** Defended July 1999 **Bank of Finland**
The Theory of Economic Policy: Strategic Interaction, Learning and the Role of Institutions
- CALEIRO Antonio** Defended April 2001 **University of Evoria, Portugal**
Business Cycles and Elections. A Possible Application to the Portuguese Economy
- CASASUS Estelles Trinidad** **Submitted in Spain**
On Rational Beliefs in Financial Markets
- NARDELLI Stefano** **Teaching at University of Venice--** not yet submitted.

Unit Roots and Outliers in Economic Time Series: Applications to Finance

At CUBS (From 1997)

DAHIES Oron

Nonlinear Statistical Arbitrage

BOUYE Eric

Defended 2003

Société General, Paris

Applications of Copulae in Finance

WESTON Steve

Submitted September 2004

Applications of H-infinity and Robust Decision Theory in Finance

EZZELDIN Marwan

Submitted September 2004

The Mixture of Distributions Hypothesis and Realised Volatility

I have also served as an external examiner for some 28 Phd students in the UK and Europe.