

## Tim Worrall

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### Education

1983 PhD in Economics (Labour Contract Theory), University of Liverpool.  
 1979 MA in Economics, Essex University.  
 1978 BA in Economics, University of Liverpool.

### Work Experience

2011- University of Edinburgh, Professor of Economics.  
 2008-2011 University of Manchester, Hallsworth Research Fellow.  
 1996-2008 Keele University, Professor of Economics.  
 1990-1996 University of Liverpool, Lecturer in Economics.  
 1989-1990 Kiel, Institut für Weltwirtschaft, Research Officer, SFB 178.  
 1987-1989 Universität Konstanz, Research Officer, SFB 178.  
 1986-1987 Reading University, Temporary Lecturer in Economics.  
 1985-1986 University of Western Ontario, Temporary Assistant Professor.  
 1983-1985 Cambridge University, Junior Research Officer.

### Publications

JOURNAL ARTICLES

2016. Pierre M. Picard and Tim Worrall: "Is a Policy of Free Movement of Workers Sustainable?", *Scandinavian Journal of Economics*, October, 118(4), pp.718–754.  
 [ doi:10.1111/sjoe.12163 ]

2012. Spiros Bougheas and Tim Worrall, "Cost Padding and Regulated Monopolies", *International Journal of Industrial Organization*, July, 30(5) pp.331–341.  
 [ doi:10.1016/j.ijindorg.2011.12.001 ]

2007. Jonathan P. Thomas and Tim Worrall, "Limited Commitment Models of the Labour Market", *Scottish Journal of Political Economy*, November, 54(5) pp.750–773.  
 [ doi:10.1111/j.1467-9485.2007.00440.x ]

2007. Jonathan P. Thomas and Tim Worrall, "Unemployment Insurance under Moral Hazard and Limited Commitment: Public vs. Private Provision", *Journal of Public Economic Theory*, February, 9(1) pp.151–181.  
 [ doi:10.1111/j.1467-9779.2007.00302.x ]

2002. Jonathan P. Thomas and Tim Worrall, "Gift-giving, Quasi-credit and Reciprocity", *Rationality and Society*, August, 14(3) pp.307–351.  
 [ doi:10.1177/1043463102014003003 ]

2002. Ethan Ligon, Jonathan P. Thomas and Tim Worrall, "Informal Insurance and Limited Commitment: Theory and Evidence from Village Economies", *Review of Economic Studies*, January, 69(1), pp.209–244.  
[ doi:10.1111/1467-937X.00204 ]
2000. Ethan Ligon, Jonathan P. Thomas and Tim Worrall, "Mutual Insurance, Individual Savings and Limited Commitment", *Review of Economic Dynamics*, April 3(2), pp.216–246.  
[ doi:10.1006/redy.1999.0081 ]
1994. Brian Hillier and Tim Worrall, "The Welfare Implications of Costly Monitoring in Credit Markets", *Economic Journal*, March, 104(423), pp.350–362.  
[ doi:10.2307/2234755 ]
1994. Jonathan P. Thomas and Tim Worrall, "Foreign Direct Investment and the Risk of Expropriation", *Review of Economic Studies*, January 60(1), pp.81–108.  
[ doi:10.2307/2297878 ]
1990. Jonathan P. Thomas and Tim Worrall, "Income Fluctuation and Asymmetric Information: An Example of a Repeated Principal-Agent Model", *Journal of Economic Theory*, August, 51(2), pp.367–390.  
[ doi:10.1016/0022-0531(90)90023-D ]
1990. Tim Worrall, "Debt with Potential Repudiation", *European Economic Review* July, 34(5), pp.1099–1109.  
[ doi:10.1016/0014-2921(90)90025-T ]
1988. Jonathan P. Thomas and Tim Worrall, "Self-Enforcing Wage Contracts", *Review of Economic Studies*, October, 55(4), pp.541–554.  
[ doi:10.2307/2297404 ]
- BOOK  
CHAPTERS
1995. Brian Hillier and Tim Worrall, "Asymmetric Information, Investment Finance and Real Business Cycles" in *The New Macroeconomics: Imperfect Markets and Policy Effectiveness*, H. Dixon and N. Rankin (eds.), Cambridge University Press, pp.245–272.
1989. Tim Worrall. "Labour Contract Theory", in *The Economics of Missing Markets, Information and Games*, F.H. Hahn (ed.), Oxford University Press, pp.336–359.
- BOOK  
REVIEWS
2001. Organisations with Incomplete Information: Essays in Economic Analysis: A Tribute to Roy Radner, edited by M. Majumdar, *Economic Journal*, June, 111(472) F550–552.
1998. The Economics of Contracts: A Primer, B. Salanie, *Economica*, November, 65(260), pp.617–618.

**WORKING PAPERS**

2017. Spiros Bougheas and Tim Worrall: "Portfolio Sales and Signaling", CESifo Working Paper no. 6354, February.

2015. Jonathan P. Thomas and Tim Worrall: "Dynamic Relational Contracts under Complete Information", Mimeo, January.

2015. Sergey Foss (Heriot-Watt University), Vsevolod Shneer (Heriot-Watt University) and Jonathan P. Thomas (University of Edinburgh): "Stochastic Stability of Monotone Economies in Regenerative Environments", Mimeo, January.

2015. Pierre M. Picard and Tim Worrall: "Currency Areas with Voluntary Transfers", Mimeo, May.

**MEDIA COVERAGE**

2016. "Watch Out for Winners and Losers: Odd-Implied Brexit Sentiment and FTSE Returns" with Costas Milas (University of Liverpool) and Robert Zymek (University of Edinburgh), London School of Economics, British Politics and Policy Blog, 22 June.

2014. "Economists Count Cost of Scottish Opinion Polls" with Costas Milas (University of Liverpool), Real Time Economics, Wall Street Journal, 11 April; London School of Economics, British Politics and Policy Blog, 25 April.

**WORK IN PROGRESS**

"Sustainable Intergenerational Insurance" with Alessia Russo (Norwegian Business School, Oslo) and Francesco Lancia (University of Naples).

"Mutual Insurance with Persistence".

"Optimal Rotating Savings and Credit Associations" with Ethan Ligon (University of California at Berkeley).

**CITATIONS**

The ISI Web of Knowledge/Scopus show over 500 citations for the published articles listed below of which over 125 are in blue ribbon (discipline's top eight) journals. Harzing's Publish or Perish software shows over 2300 citations. Articles are cited and discussed in the core graduate text of Sargent and Ljungqvist, *Recursive Macroeconomic Theory* (MIT Press, 2004). The most cited article is "Informal Insurance and Limited Commitment: Theory and Evidence from Village Economies", which has over 150 citations.

### **Grants and Awards**

2015-2020 Economic and Social Research Council, Co-investigator (one of nine from Edinburgh), Credit and labour market foundations of the macroeconomy, (John Hardman-Moore, Principal Investigator, £6 million).

2006-2007 Royal Economic Society, November 2006 - April 2007: An evaluation of the performance of UK research in economics (24k).

2004-2006 Economic and Social Research Council, Co-investigator, Self-enforcing and dynamic relational contracts (Jonathan Thomas, Principal Investigator, 151k).

- 2001-2003 Department for International Development, Co-investigator (one of three from Keele), The effects of macro-financial liberalisation policies on micro-household savings and credit behaviour in developing countries (Peter Lawrence, Principal Investigator, 125k).
- 1998-1999 Leverhulme Trust Fellowship, Quasi-credit in LDCs (15k).
- 1998 Keele Research Incentive Scheme, 1999: Quasi-credit and LDCs (5k).

### **External Research Talks**

- INVITED TALKS
- 2017: Umeå University, Sweden, February.
- 2015: Heriot-Watt University, November. University of Hull, February.
- 2014: University of Manchester, September; Money, Macro, Finance Conference, University of Durham, September.
- 2013: University of Liverpool, November; University of Oslo, September; Yonsei University, Seoul, Korea, June; York Game Theory Symposium, York University, June.
- 2012: Workshop on macroeconomic applications of dynamic games and contracts, Stony Brook University, New York, July; Keele University, February; Strathclyde University, February; City University, January.
- 2011: Durham University, October.
- 2010: University of Dundee, March.
- 2009: University of Surrey, November; Workshop on the theory and empirics of risk sharing, Gremaq, Toulouse School of Economics, October; Regional Studies Research Network Workshop on Geographical localisation, intersectoral reallocation of labour and unemployment differentials, Rimini, May.
- 2008: Warwick University, November; 2nd St Andrews Workshop in applied microeconomics, September.
- 2007: Canadian Macroeconomic Study Group, Ottawa, November; University of Durham, November; Workshop on risk sharing, Toulouse School of Economics, September; Bristol University, May; Sheffield University, May.
- 2006: University of California at Berkeley, March; Manchester University, February.
- 2004: Queen's University Belfast, May. Birmingham University, May.
- 2003: Durham University, November; Game Theory Workshop, University of Nottingham, April; University of Newcastle, April.
- 2002: Birkbeck College London, March; University of Surrey, February.
- 2000: South Bank University, May; Nottingham University, May.
- 1999: Birmingham University, November; Department of Agricultural Resource Economics, University of California at Berkeley, April.
- 1997: Durham University, April.
- 1996: University of Liverpool, June; University of Loughborough, May; Institute for Empirical Macroeconomics at the Federal Reserve Bank of Minneapolis, Minnesota, April.

- INVITED TALKS
- 1995: University of Manchester, April.
- 1994: Summer Research Workshop on New Macroeconomics, Warwick University, July; University of Sheffield, April; University of Keele, February.
- 1993: University of Aberystwyth, May; University of Exeter, November; University of Salford, January; 1st Summer School in Economic Theory at La Sorbonne, Paris, April; Centre for Operations Research and Economics at the University of Louvain-la-Neuve, Belgium, April.
- CONFERENCE TALKS
- 2017: Society for Economic Dynamics, Edinburgh, June; Society for the Advancement of Economic Theory, Faro, June.
- 2016: Theoretical Research in Development Economics conference, Duke University, April.
- 2015: Society for the Advancement of Economic Theory, Cambridge, UK, July.
- 2012: Journées d'Economie Publique Louis-André Gérard-Varet, Marseilles, June.
- 2011: European Trade Study Group, Copenhagen, September; Society for Economic Dynamics, Ghent, July; Society for the Advancement of Economic Theory, Faro, June; Econometric Society Winter Meetings, Denver, January.
- 2009: Society for Economic Dynamics, Istanbul, July; Canadian Economic Association, Toronto, May.
- 2008: Society for Economic Dynamics, Massachusetts Institute of Technology, July.
- 2006: Econometric Society European Meetings, Vienna, August; European Economic Association, Vienna, August; Canadian Economic Association, Montreal, May; Royal Economic Society, Nottingham, April.
- 2005: Society for Economic Dynamics, Budapest, June.
- 2004: European Economic Association, Madrid, August.
- 2003: Econometric Society European Meetings, Stockholm, August; Game Theory Workshop, University of Nottingham, April.
- 2001: Econometric Society European Meetings, Lausanne, August.
- 1999: Econometric Society, Santiago de Compostela, August.
- 1995: 7th World Congress of the Econometric Society, Tokyo, August.
- 1993: Royal Economic Society, York, April.
- 1990: 6th World Congress of the Econometric Society in Barcelona, August.
- 1986: European Congress of the Econometric Society, Budapest, August.
- 1985: 5th World Congress of the Econometric Society in Cambridge, Massachusetts, August.
- 1984: European Congress of the Econometric Society, Madrid, August.

### **Honourary and Visiting Positions**

HONORARY POSITIONS	2012-present. Member, Network in Applied and Theoretical Economics. 2011-2013. Honorary Fellow, University of Manchester. 2008-present. Senior Fellow, Rimini Centre for Economic Analysis. 1996-1998 and 2001-2004. Honorary Fellow, University of Liverpool.
VISITS	2013. Centre for the Study of Equality, Social Organisation and Performance, University of Oslo, Norway September; Department of Economics, Yonsei University, South Korea, June 2012. Department of Agricultural Resource Economics, University of California at Berkeley, April-May. 2011. Department of Economics, University of Vienna, December; RE-Cent (Center for Economic Research), Department of Political Economy, University of Modena and Reggio Emilia, May. 2006. Department of Agricultural Resource Economics, University of California at Berkeley, February-April. 1996. Institute for Empirical Macroeconomics, Federal Reserve Bank of Minneapolis, April. 1992. Centre for Operational Research and Economics, Louvain-la-Neuve, April.

### **Teaching Experience**

CURRENT COURSES	Course Co-ordinator: Doctoral Level Mathematical Economics and Microeconomics, Masters Level Asset Pricing.
UG COURSES	Corporate Finance; Econometrics; Economics of Asymmetric Information; Game Theory; Intermediate Finance; International Economics; Introductory Economics; Labour Economics; Management Science; Managerial Economics; Mathematical Economics; Microeconomics; Options and Futures; Quantitative Methods.
PG COURSES	Contract Theory; Corporate Finance; Game Theory; Financial Mathematics; Financial Instruments; Asset Pricing; Microeconomics; Regulatory Economics; Topics in Economic Theory.
UG SUPERVISION	Areas supervised: Charitable giving; Competition policy; Economics of climate change; Economics of gambling; Economics of marriage; Economics of sport; Tax non-compliance; Deregulation; Housing markets.
PG SUPERVISION	Topics include: Calendar effects; Credit default swaps; Executive compensation; Financial distress; Capital structure; Mergers & acquisitions; Real estate investment trusts; Transfer pricing; Third order price discrimination; Consumption and house prices; Portfolio management; Risk-sharing and migration; Credit cycles.

INTERNAL PH.D. EXAMINING	<p>2016. Ibrahim Inal (Edinburgh), Essays on beliefs and knowledge.</p> <p>2014. James Best (Edinburgh), Social learning, cooperation, asset markets and human capital.</p> <p>2013. Nicholas Myers (Edinburgh), Trade costs and national borders.</p> <p>2006. Petar Bozhinov (Keele), Constant relative risk aversion and rent-seeking games.</p> <p>2005. Ji-Tian Jeng (Keele), Bayesian aggregative games.</p> <p>2002. Clare Kelly (Keele), Consumption smoothing in the short-run: effects of uncertainty and imperfect capital markets.</p> <p>2001. Fabiano Vergari (Keele), Finance and development; an analysis of the role of equity markets and the banking sector in developed and lesser-developed countries.</p>
DOCTORAL SUPERVISION	<p>Pongpalin Yingchoncharoen: Growth and Inequality (current - first year).</p> <p>Sikandar Soin: Networks (current - first year).</p> <p>Aodi Tang: Experimentation (current - writing-up year).</p> <p>Sareh Vosooghi (Stipendiary Lecturer, St Edmund Hall, University of Oxford): Essays on Information and Transboundary Problems in Environmental and Resource Economics, University of Edinburgh, 5 September 2016 (passed with minor revisions).</p> <p>Rongyu Wang (Postdoctoral Researcher, Wilfrid Laurier University): Games of Incomplete Information, University of Edinburgh, 1 August 2016 (passed without revisions).</p> <p>Vasco Filipe de Figueiredo Alves (Lecturer in Economics, University of Northampton): Essays in Strategic Queuing, University of Edinburgh, 29 January 2016 (passed with minor revisions).</p> <p>Michael King: A Rationale for Tying Merchants' Membership of Platforms Serving Independent Markets, University of Manchester, 2011 (passed with minor revisions).</p> <p>Ioannis Lazopoulos (Lecturer in Economics, University of Surrey): Debt Contracts and Bank Runs, Keele University, 2006 (passed without revisions, awarded with commendation).</p> <p>Alex Dickson (Senior Lecturer in Economics, University of Strathclyde): On Strategic Marshallian Analysis: Shapley and Shubik meet Marshall and Cournot, Keele University, 2005 (passed with minor revisions, awarded with commendation).</p> <p>Svetlana Andrianova (Reader in Economics, University of Leicester): Essays on Collusion, Corruption and Reforms, London South Bank University, 2001 (passed without revisions).</p>
OTHER EXAMINING	<p>2008-2012. Chief Examiner for Corporate Finance, Institute of Financial Services, ifs University College.</p>

## Service to the Discipline

- JOURNAL SERVICE** Guest Editor, *Games*, Special Issue on Contract Theory, 2013. Contributors include: Oliver Hart, Joel Watson, Xiaojian Zhao.  
Associate Editor, *Quantitative and Qualitative Analysis in Social Sciences*, 2006-2011.  
Refereeing for: *American Economic Review*, *Economic Journal*, *Economic Theory*, *Econometrica*, *European Economic Review*, *Games and Economic Behavior*, *International Economic Review*, *Journal of Economic Theory*, *Journal of the European Economic Association*, *Journal of Political Economy*, *Quarterly Journal of Economics*, *Rand Journal of Economics*, *Review of Economic Studies*. plus over 40 other journals.  
Book refereeing for: Addison Wesley, Cambridge University Press, Harper-Collins, MIT Press, Pearson Education.
- PEER REVIEWING** Carnegie Trust, Scotland; British Academy, UK; Economic and Social Research Council, UK; Engineering and Physical Sciences Research Council, UK; Leverhulme Trust, UK; Nuffield Foundation, UK; National Science Foundation, USA; Social Sciences and Humanities Research Council, Canada.
- CONGRESSES** Program Committee Member: RES 2009 Surrey; RES 2008 Warwick; RES 2007 Warwick; RES PhD Presentation Meetings London 2006 and 2007; EEA 2005 Amsterdam; EEA-ESEM 2004 Madrid; EEA-ESEM 2003 Stockholm.  
Local Organizer, Society for Economic Dynamics, Edinburgh, June 2017; Session Organizer, Society for Advancement of Economic Theory Meetings, Paris, June 2013; Session Organizer, Society for Advancement of Economic Theory Meetings, Faro, Portugal, June 2011; Manchester and Society for Advancement of Economic Theory Workshop in Economic Theory, May 2010; Midland Game Theory Workshop, Manchester, June 2009; Workshop on Limited Commitment, Edinburgh, September 2005; Midlands Game Theory Workshop, Keele, May 2004.
- COMMITTEE MEMBERSHIP** Elected member of the Royal Economic Society Council (Education, Training & Schools), 2016-2021; Member of Scientific Committee (Economics) for the Chartered Association of Business Schools Academic Journal Guide, 2013-14. Member of Economic and Social Research Council Peer Review College, 2010-2014. Member of Institute of Financial Services, School of Finance Academic Board 2008-11. Secretary to Conference of Heads of University Department of Economics (CHUDE), 2007-2012 and Steering group member, 2005-2013. Advisor to Steering Group for ESRC International Benchmarking of Economics, 2007-8.



EXTERNAL EXAMINING	B.A. Economics, Nottingham, 2017-2020; B.A. Economics, Warwick, 2016-2019; M.Sc. Economics, London School of Economics, 2012-2015; B.A. Economics, Essex, 2006-2009; B.Sc. and M.Sc. Economics, Birmingham, 2005-2009; M.Sc. Economics, University College London, 2003-2007; B.A. and M.A. Economics, Leicester, 2002-2005; Postgraduate Certificate in Finance, Birkbeck College London, 2001-2005.
OTHER SERVICE	External Assessor for Periodic Review of the Department of Economics, York University, April 2017. External Assessor for Chair in Economics, University of Pretoria, May 2011. External Assessor for Chair in Economics, York University, June 2010. Member of Research Review Team, Durham Business School, May 2009; External Advisor, Periodic Review, School of Social Sciences, University of Manchester, April 2007; External Assessor, Investment Management Course, LSE External Study Programme, April 2005. Talk on Black-Scholes Formulae to Mathematical Modelling Centre, Leicester, May 2002. Referee for 8th International Symposium on Intelligent Robotic Systems, 2000.
PH.D. EXAMINING	<p>2017. Oscar Nieto-Cerezo (Liverpool), On optimal risk and benefit sharing in engineering projects.</p> <p>2016. Krzysztof Brzezinski (Manchester), Essays on effects of uncertainty on competition among firms and political parties.</p> <p>2010. Yuki Kumagai (Nottingham), Networks and markets: repeated trade, self-enforcing cooperation under uncertainty and institutional interaction.</p> <p>2007. Sinan Lu (Nottingham), Capital structure and bankruptcy; Hong-gang Qiu (York), Optimal collusion-proof contracts.</p> <p>2005. Saksit Thananittayaudom (Nottingham), Essays on imperfect competition, research and development, and financial constraints.</p> <p>2001. Cavelle Dawn Creightney (Warwick) Essays on intra-household bargaining, risk-sharing, and the optimal balance between private insurance and the welfare state.</p> <p>2000. Anna Maria Cristina Menichini (York), Costly auditing in models with commitment and no commitment.</p> <p>1997. Shirley Jin-Shien Ho (Warwick), Asymmetric multistage models of R&amp;D : technology, adoption, contracts and protection.</p> <p>1996. Jonathan Rougier (Durham), Price change and trading volume in a speculative market.</p>

### **Service to Department/University**

- DEPARTMENT** Deputy Head of School (Edinburgh), 2014-present.  
 PhD Director (Edinburgh), 2013-present.  
 Director for Career Development and Capacity Building, MacCaLM Project (Edinburgh), 2015-present.  
 Member of Local Organizing Committee for the Society for Economic Dynamics Conference in Edinburgh, 2016-2017.  
 Convenor of Postgraduate Board of Studies (Edinburgh), 2016-present.  
 Member of Teaching and Learning Committee (Edinburgh), 2013-present.  
 Personal Tutor (Edinburgh), 2012-present.  
 Director of Postgraduate Research (Keele), 2006-2008.  
 Director of Research (Keele), 2005-2008.  
 Head of Department (Keele), 2001-2004.  
 Examinations Secretary (Keele), 2000.  
 Director of Management Science Principal (Keele), 1998-1999.  
 Member of Learning and Teaching Committee (Keele), 1997-2004.  
 Director of Finance Principal (Keele), 1997-1998.  
 Chartered Institute of Management Accountants Liaison Officer (Keele), 1997-1999.  
 Member of Research Committee (Keele), 1996-2008.  
 Seminar Coordinator (Keele), 1996-2000.  
 Postgraduate Admissions Tutor (Liverpool), 1995-1996.  
 Organized Staff-Student Conference (Liverpool), 1994-1995.  
 Undergraduate Admissions Tutor (Liverpool), 1991-1995.
- UNIVERSITY** Member of Quartermile Working Group on Politics, Communities and Infrastructure (Edinburgh), 2016.  
 Member of Postgraduate Administration Review Project Board (Edinburgh), 2016-2017.  
 Member of College Postgraduate Studies Committee (Edinburgh), 2013-.  
 Member of the Management Board, Research Institute of Public Policy and Management (Keele), 2005-2008.  
 Member of Appointments Panel for Head of Management School (Keele), 2005.  
 Chair of University Plagiarism Committee (Keele), 2004.  
 Member of Quality Assurance Committee for Complementary Studies Programme (Keele), 2004.  
 Member of Appointments Panel for Dean of Faculty (Keele), 2004.  
 Member of Board of the Graduate School of Social Science (Keele), 2001-2004.  
 Member of Senate (Keele), 2001-2004.  
 Member of Management Committee of Graduate School of Social Sciences (Liverpool), 1993-1996.