



**Conference in honour of
Keith Pavitt**

“What Do We Know About Innovation?”

Thursday, 13 – Saturday, 15 November, 2003

at

The Freeman Centre, University of Sussex, Brighton, UK



✳
University of Brighton
CENTRIM
Centre for Research in
Innovation Management

Scientific Committee

Giovanni Dosi, Scuola Superiori di Studi Universitari 'S. Anna' Pisa
Chris Freeman, University of Sussex
Ove Granstrand, Chalmers University of Technology
Stan Metcalfe, University of Manchester
David Mowery, University of California at Berkeley
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Luigi Orsenigo, Università Bocconi
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Keld Laursen, Copenhagen Business School
Orietta Marsili, Erasmus University
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Paul Nightingale, University of Sussex
Andrea Prencipe, Universities of Sussex/G. d'Annunzio
Ammon Salter, Imperial College, London
Jonathan Sapsed, University of Brighton
Fred Tell, Linköping University
Bruce Tether, University of Manchester
Richard Torbett, Department of Trade and Industry

Sponsors

We would like to acknowledge and thank the following institutions for the generous support they have provided for this conference

**Economic and Social Research Council
Department of Trade and Industry
Engineering and Physical Sciences Research Council
University of Sussex**

Thursday, 13th November 2003

11.00-13.30 Registration in the Freeman Centre					
12.00-13.30 Buffet Lunch in the Freeman Centre					
14.00	<p style="text-align: center;">Welcome and Opening Remarks on “What we know about Innovation” in the Medical School Auditorium</p> <p>Chair: Ben Martin (University of Sussex)</p> <p>Speakers: Ben Martin (University of Sussex) Lord Sainsbury (Minister for Science and Innovation, Department of Trade and Industry, UK) Chris Freeman (University of Sussex)</p>				
15.00	<p style="text-align: center;">Debate 1. Policy Debate in the Medical School Auditorium</p> <p>Debate Motion “Let it be resolved that recent attempts to make academic research more user-oriented have undermined its value”</p> <p>Chair: Baroness Sharp of Guildford (House of Lords)</p> <p>Speaking for Richard Nelson (Columbia University) Staffan Jacobsson (Chalmers University of Technology)</p> <p>Speaking against Ben Martin (University of Sussex) Diana Hicks (Georgia Institute of Technology)</p>				
16.00	Tea break in the Freeman Centre				
16.30	Parallel Sessions in the Freeman Centre				
18.00	<p>Room G25: ID1: The Network Geography of Innovation</p>	<p>Room G23: ID8: Organising for Innovation</p>	<p>Room F13. STP1: Understanding University-Industry Interaction</p>	<p>Room G24: MI1: Technology, Complexity and Design</p>	<p>Room G22: INT1: Technology and Ownership</p>
19.30-21.30 Drinks Reception, Royal Pavilion, Brighton (prebooked only)					

Thursday, 13th November 16.30 - 1800

Parallel Sessions

Freeman Centre

Session ID1 The Network Geography of Innovation
 Chair Staffan Jacobsson (Chalmers University of Technology)
 Discussant Bart Verspagen (Eindhoven University of Technology)
 Room G25
 Time 16.30-18.00, Thursday, 13th November

Paper 1	The Increasing Importance of Geographical Proximity in Technological Innovation: An Analysis of U.S. Patent Citations, 1975-1997	Jung Won Sonn (UCLA) & Michael Storper (LSE/Institut of Political Studies, Paris)
Paper 2	Social Networks, Innovation and Industrial Organization: The Lessons of Russian Industrial Conversion	Natalia Agapitova (University of Poitiers/Perm State Technical University)
Paper 3	Measuring Innovations in the Knowledge Economy	Staffan Laestadius (Royal Institute of Technology, Stockholm)

Session ID8 Organising for Innovation
 Chair Aldo Geuna (University of Sussex)
 Discussant Ludovic Dibiaggio (CERAM, Sophia Antipolis/University of Brighton)
 Room G23
 Time 16.30-18.00, Thursday, 13th November

Paper 1	The Value of Innovation: The Interaction of Competition, R&D and IP	Mark Rogers & Christine Greenhalgh (Oxford IP Research Centre)
Paper 2	Innovation and Competition	Anita McGahan (Boston University) & Brian S. Silverman (University of Toronto)
Paper 3	Patterns of Growth of Technology-based SMEs in Europe	Paola Giuri & Alessandra Luzzi (Scuola Superiore Sant'Anna, Pisa)

Session STP1 Understanding University-Industry Interaction
 Chair Pari Patel (University of Sussex)
 Discussant Scott Stern (Northwestern University)
 Room F13
 Time 16.30-18.00, Thursday, 13th November

Paper 1	Trademarks as an Indicator of Innovation and Industrial Change	Sandro Mendonça (ISCTE University Lisbon), Tiago Santos Pereira (University of Coimbra) & Manuel Mira Godinho (Technical University of Lisbon)
Paper 2	The Contribution of Academia to Industry	Rosette S'Jegers & Lucia Smit (Vrije Universiteit, Brussels)
Paper 3	Pushing the Envelope: Self-organised selective involvement of public science in industrial biotechnology	Finn Valentin & Rasmus Lund Jensen (Copenhagen Business School)

Session MI1 Technology, Complexity and Design
 Chair Piera Morlacchi (University of Sussex)
 Discussant Melissa Appleyard (Portland State University)
 Room G24
 Time 16.30-18.00, Thursday, 13th November

Paper 1	From a Few Craftsmen to an International Network of Alliances: Bosch Diesel Fuel Injection Systems	Don Kash & Robin Auger (George Mason University)
Paper 2	The Design of Complex Product Systems – Two Alternative Models and Their Implications for Projects	Michael Pryce (University of Sussex)
Paper 3	Systems of innovation, corporate innovation strategies and the promotion of environmentally sustainable energy in the UK: the case of fuel cell technology	Audley Genus (University of Newcastle) & Anne-Marie Coles (Brunel University)

Session INT1 Technology and Ownership
 Chair Bo Carlsson (Case Western Reserve University)
 Discussant Rajneesh Narula (Copenhagen Business School)
 Room G22
 Time 16.30-18.00, Thursday, 13th November

Paper 1	Companies' Purchase of Foreign R&D: New Evidence from Norway	Magnus Gulbrandsen (NIFU, Norway)
Paper 2	Determinants of Overseas Laboratory Ownership by Japanese Multinationals	Tomoko Iwasa (NISTEP)
Paper 3	Patent Reforms and Pharmaceutical Innovation: A Cross-Country Study Using European Patent Data	Maria Pluvia Zuniga (University of Paris-1) and Jaime Aboites (Universidad Autonoma Metropolitana)

Friday, 14th November 2003

09.00	Debate 2. Globalisation of Innovation Debate in the Medical School Auditorium				
	Debate Motion	“Let it be resolved that this conference believes that despite the recent internationalisation of many scientific and technological activities, innovation – and related ‘high-tech’ production activities- will remain concentrated in a small number of regions”			
	Chair:	Keld Laursen (Copenhagen Business School)			
	Speaking for	Martin Bell (University of Sussex) Michael Storper (LSE/Institute of Political Studies, Paris)			
	Speaking against	Dieter Ernst (EastWest Center, Honolulu/University of Norway) Daniele Archibugi (Italian National Research Council/LSE)			
10.00	Coffee break in the Freeman Centre				
10.30	Parallel Sessions in the Freeman Centre				
	Room G25: ID2: Innovation Strategies and Networks	Room G23: ID7: Industrial Dynamics	Room F13. STP2: Policy and Measurement	Room G24: MI2: Technology Selection and Evolution	Room G22: INT2: Knowledge and Internationalisation
12.00-13.30 Poster Session and Buffet Lunch in the Freeman Centre					

Friday, 14th November, 10.30 – 12.00

Parallel Sessions

Freeman Centre

Session ID2 Innovation Strategies and Networks
 Chair Joe Tidd (University of Sussex)
 Discussant Jim Utterback (Massachusetts Institute of Technology)
 Room G25
 Time 10.30-12.00, Friday, 14th November

Paper 1	Double Fantasy: The Antinomic Relationship Between Technical Discipline and Project Integrity	Jonathan Sapsed (University of Brighton)
Paper 2	Sticking to your Knitting or Changing Business Model? Discontinuities and Capabilities in Electrical Power Generation Equipment Manufacturing	Thomas Magnusson, Fredrik Tell (Linköping University) & Jim Watson (University of Sussex)
Paper 3	Beyond Normal Products and Development Processes: Computer Games as Interactive Experiential Goods and their Manner of Development	Ted Tschang (Singapore Management University)

Session ID7 Industrial Dynamics
 Chair Richard Nelson (Columbia University, New York)
 Discussant Virginia Acha (University of Sussex)
 Room G23
 Time 10.30-12.00, Friday, 14th November

Paper 1	The Role of Distributed Corporate Technological Competencies in the Anticipation of, and Response to, Technological Opportunity	Felicia Fai (University of Bath)
Paper 2	Empirics and Abstraction in the Analysis of Innovation: The Size Distribution of Innovations	Gerald Silverberg (University of Maastricht) & Bart Verspagen (Eindhoven University of Technology)
Paper 3	Cluster Absorptive Capacity: A Comparative Study between Chile and Italy	Elisa Giuliani (University of Pisa)

Session STP2 Policy and Measurement
 Chair João Carlos Ferraz (ECLAC)
 Discussant Aldo Geuna (University of Sussex)
 Room F13
 Time 10.30-12.00, Friday, 14th November

Paper 1	National Innovation Measurement between Scoreboarding, Metrics Making and Mapping	Hariolf Grupp (Fraunhofer ISI and Karlsruhe University)
Paper 2	Gender, Age, Cohort and Period Effects in Individual Differences in Scientific Research Productivity: An Econometric Analysis of the Publications of a Panel of French Physicists in Condensed Matter (1980-1997)	Jacques Mairesse (CREST-INSEE, France), Laure Turner (University of Paris) & Bronwyn Hall (University of California)
Paper 3	Catching Up or Standing Still? National Innovative Productivity Among “Follower” Nations, 1980-2000	Jeffrey Furman (Boston University School of Management) and Richard Hayes (Melbourne Business School)

Session MI2 Technology Selection and Evolution

Chair Franco Malerba (Università Bocconi)

Discussant Mike Hobday (University of Sussex)

Room G24

Time 10.30-12.00, Friday, 14th November

Paper 1	Managing Events during Bifurcations of Technological Trajectories	Nassef Hmimda (Ecole Centrale Paris), Staffan Hulten (Stockholm School of Economics) & Nicolas Pasquet (Ecole Centrale Paris)
Paper 2	Framing the Future: Uncovering the Micromechanisms of Technology Strategy Making	Sarah Kaplan (Massachusetts Institute of Technology)
Paper 3	Before and After the Revolution of Molecular Biology. An Analysis of the Evolution of the Technological Competencies of German Pharmaceutical Corporations	Iciar Dominguez Lacasa (Fraunhofer ISI, Karlsruhe)

Session INT2 Knowledge and Internationalisation

Chair Jose Molero (Universidad Complutense de Madrid)

Discussant Gabriela Dutrénit (Universidad Autónoma Metropolitana)

Room G22

Time 10.30-12.00, Friday, 14th November

Paper 1	Transfer of Knowledge Inside the Global R&D Network: The Case of European Pharmaceutical Companies	Paola Criscuolo (University of Sussex)
Paper 2	Geographic Concentration of Innovation in Agrifood Multinationals	Oscar Alfranca (Universitat Politècnica De Catalunya)
Paper 3	On the Nature of Knowledge Creation in MNE Subsidiaries: An Empirical Analysis Using Patent Data	John Cantwell (Rutgers Business School) & Ram Mudambi (Temple University)

Friday, 14th November, 12.00 – 13.30

Poster Session

Freeman Centre

We are organising a poster session which will allow some of the most renowned researchers in the field to present *their* work to junior researchers (rather than the other way around, as usually happens). We hope that the informal and lively social occasion surrounding the exhibition of the posters will facilitate the establishment of contacts and interaction.

Those who have agreed to present posters include

Dick Nelson

David Mowery

Ove Granstrand, John Cantwell and Salvatore Torrissi

Luigi Orsenigo

Nick von Tunzelmann

Stan Metcalfe

Howard Rush and John Bessant

Bart Verspagen & Claudia Werker

Friday, 14th November 2003

13.30	Parallel Sessions in the Freeman Centre				
	Room G25: ID3: Networks, Knowledge and Innovation	Room G23: ID9: Disruption and Survival	Room F13: STP3: Interaction, Substitution & Innovation in Science Policy	Room G24: MI3: Technological Knowledge and Diversity	Room G22: INT3: Innovation and Internationalisation
15.00	Tea break in the Freeman Centre				
15.30	Parallel Sessions in the Freeman Centre				
	Room G25: ID4: Innovation and Productivity	Room G23: MI7: Technological Competences and Commercialisation	Room F13: STP4: Policies for Developing Technological Capabilities	Room G24: MI4: Innovation, Firms and Institutional Links	Room G22: INT4: Technology and Internationalisation
17.00	Debate 3. Managing Technology Debate in the Medical School Auditorium				
	Debate Motion	"This conference believes that the activities of the firm are largely determined by technology"			
	Chair:	Jonathan Sapsed (University of Brighton)			
	Speaking for	Henry Chesbrough (Haas, UC Berkeley) Ove Granstrand (Chalmers University of Technology)			
18.00	Speaking against	Bruce Kogut (University of Pennsylvania/INSEAD) Connie Helfat (Tuck School of Business)			
19.30 for 20.00 Conference Dinner at Metropole Hotel, Brighton (prebooked only)					

Friday, 14th November, 13.30 – 15.00

Parallel Sessions

Freeman Centre

Session ID3 Networks, Knowledge and Innovation
 Chair Jeffrey T Macher (Georgetown University)
 Discussant Stan Metcalfe (University of Manchester)
 Room G25
 Time 13.30-15.00, Friday, 14th November

Paper 1	Persistent Knowledge Specialisation and Intra-industry Heterogeneity: an analysis of the Spanish pharmaceutical industry	Pablo D'Este (University of Sussex)
Paper 2	In the Eye of the Beholder: Reconciling Incremental and Punctuated Equilibrium Views on Technological Evolution	Atul Nerkar (Columbia Business School) & Lori Rosenkopf (University of Pennsylvania)
Paper 3	Technological Competencies and The Evolution of Networks	Laura Magazzini (Scuola Superiore Sant'Anna, Pisa), Fabio Pammolli & Massimo Riccaboni (University of Florence)

Session ID9 Disruption and Survival
 Chair Virginia Acha (University of Sussex)
 Discussant David Mowery (University of California)
 Room G23
 Time 13.30-15.00, Friday, 14th November

Paper 1	Persistence in Innovation: Evidence from Data on UK SMEs	Suma Athreye & Suzanne Edwards (Open University)
Paper 2	Survivor: The Role of Innovation in Firm's Survival	Elena Cefis (Utrecht School of Economics/University of Bergamo) & Orietta Marsili (Erasmus University)
Paper 3	Disruptive Technology: Predator or Prey?	James Utterback & Hap Acee (Massachusetts Institute of Technology)

Session STP3 Interaction, Substitution and Innovation in Science Policy
 Chair Margaret Sharp (House of Lords/University of Sussex)
 Discussant Dominique Foray (OECD/CERI)
 Room F13
 Time 13.30-15.00, Friday, 14th November

Paper 1	Public Science and Technological Innovation: Some Lessons from China	Dazhou Wang (Imperial College)
Paper 2	Do Public R&D Subsidies Affect the Labor Demand? Experiences from Finland	Bernd Ebersberger (VTT, Espoo)
Paper 3	Scholarship and Inventive Activity in the University: Complements or Substitutes	Brent Goldfarb (University of Maryland), Gerald Marschke and Amy Smith (University at Albany, State University of New York)

Session MI3 Technological Knowledge and Diversity
 Chair Jacqueline Senker (University of Sussex)
 Discussant Peter Augsdorfer (Fachhochschule Ingolstadt)
 Room G24
 Time 13.30-15.00, Friday, 14th November

Paper 1	Innovation Objectives, Knowledge Sources and the Benefits of Breadth	Aija Leiponen (Cornell University) & Constance Helfat (Tuck School of Business)
Paper 2	Knowledge Bridges between Islands of Technologies. How do Firms Specialise in the Semiconductor Industry? Does it Matter?	Ludovic Dibiaggio (CERAM, Sophia Antipolis/University of Brighton) & Lionel Nesta (University of Sussex)
Paper 3	Divergent Selection and Technological Innovation: Evidence from Corning Inc	Gino Cattani & Sidney Winter (University of Pennsylvania)

Session INT3 Innovation and Internationalisation
 Chair Stefano Brusoni (Università Bocconi)
 Discussant Daniele Archibugi (Italian National Research Council/LSE)
 Room G22
 Time 13.30-15.00, Friday, 14th November

Paper 1	Technological Internationalisation in the Electro-technical Industry: A Cross-company Comparison of Patenting Patterns, 1986-2000	Anna Bergek & Christian Berggren (Linköping University)
Paper 2	Internationalisation of Innovation Systems: A Survey of the Literature	Bo Carlsson (Case Western Reserve University)
Paper 3	Internationalisation of Innovation: Why is Chip Design Moving to Asia?	Dieter Ernst (East-West Center, Honolulu)

Friday, 14th November, 15.30 – 17.00

Parallel Sessions

Freeman Centre

Session ID4 Innovation and Productivity
 Chair Keld Laursen (Copenhagen Business School)
 Discussant Bronwyn Hall (University of California)
 Room G25
 Time 15.30-17.00, Friday, 14th November

Paper 1	Forward or Backward Causality – or Just a Correlation? On the Link Between Financing Research, R&D and Productivity	Hans Lööf & Almas Heshmati (Royal Institute of Technology, Sweden/United Nations University)
Paper 2	ICT, Innovation and Productivity	George van Leeuwen & Henry van der Wiel (CPB Netherlands Bureau for Economic Policy Analysis)
Paper 3	Innovative Shocks and Productivity	Pedro Conceição (Lisbon Technical University), Pedro Ferreira (Carnegie Mellon University/Lisbon Technical University), Manuel Heitor (Lisbon Technical University) & Francisco Veloso (Portuguese Catholic University)

Session MI7 Technological Competences and Commercialisation
 Chair Andy Davies (University of Sussex)
 Discussant Anita McGahan (Boston University)
 Room G23
 Time 15.30-17.00, Friday, 14th November

Paper 1	Technology Business Models: The Role of Inseparabilities	Allan Afuah (University of Michigan)
Paper 2	Reconfiguration of Competencies for Innovation – The Case of the Indian Pharmaceutical Industry	Dinar Kale, Stephen Little and Matt Hinton (Open University)
Paper 3	Generation and Applicability of Technological Competencies. Another Way of Measuring Coherence in Corporate Diversification	Lucia Piscitello (Politecnico Di Milano)

Session STP4 Policies for Developing Technological Capabilities
 Chair Gabriela Dutrenit (Universidad Autónoma Metropolitana)
 Discussant Raphael Kaplinsky (Universities of Brighton & Sussex)
 Room F13
 Time 15.30-17.00, Friday, 14th November

Paper 1	The Accumulation of Basic Research Capabilities in Developing Countries: The Korean Case	Jae-Yong Choung (Information and Communications University, Taejon) & Hye-Ran Hwang (Daejeon Development Research Institute)
Paper 2	Diffusion of Academic R&D Capabilities as an Industrial Innovation Policy? – The Development of Israel's IT Industry	Dan Breznitz (Massachusetts Institute of Technology)
Paper 3	Economic Liberalisation and Industrial Competitiveness in Brazil	João Carlos Ferraz (ECLAC), David Kupfer & Mariana Iooty (Federal University, Rio de Janeiro)

Session MI4 Innovation, Firms and Institutional Links

Chair Paul Nightingale (University of Sussex)
Discussant Luigi Orsenigo (Università Bocconi)
Room G24
Time 15.30-17.00, Friday, 14th November

Paper 1	University-industry Partnerships: The Role of Organisational Boundaries	Sachi Hatakenaka (Massachusetts Institute of Technology)
Paper 2	EU-sponsored versus “Spontaneous” R&D Collaborations: Towards a Micro-analysis	Sandrine Wolff & Mireille Matt (University Louis Pasteur, Strasbourg)
Paper 3	Contingency in Innovation and the Role of National Systems: Taxol and Taxotère in the USA and France	Muriel Le Roux (CNRS-IHMC-ENS, Paris) & Vivien Walsh (University of Manchester)

Session INT4 Technology and Internationalisation

Chair John Cantwell (Rutgers Business School)
Discussant Martin Bell (University of Sussex)
Room G22
Time 15.30-17.00, Friday, 14th November

Paper 1	Internationalisation of MNCs’ Technological Activities: What Role for Brazilian Subsidiaries?	Sergio Queiroz, Mariana Zanatta and Carolina Andrade (UNICAMP)
Paper 2	Technology and the Generation of International Knowledge Spillovers. An Application to Spanish Manufacturing Firms	Isabel Alvarez & Jose Molero (Universidad Complutense de Madrid)
Paper 3	Innovation Networks and Foreign Firms in Developing Countries: The Turkish Case	Erol Taymaz & Aykut Lenger (Middle East Technical University)

Saturday, 15th November 2003

09.00	Parallel Sessions in the Freeman Centre				
	Room G25: ID5: Models of Industrial Evolution	Room G23: MI9: Industry-Specific Innovation	Room F13: STP5: University-Industry Interactions and Innovation	Room G24: MI5: Modularity, Cognition and Innovation	Room G22: INT5: Internationalisation, Technology and Trade
10.30	Coffee break in the Freeman Centre				
11.00	Parallel Sessions in the Freeman Centre				
	Room G25: ID6: Technology and Industrial Change	Room G23: MI8: Knowledge and Firm Structure	Room F13: STP6: Measuring Innovation and Policy: New Tools and Challenges	Room G24: MI6: Performing Innovation	Room G22: STP7: National Policy Studies
12.30	Buffet Lunch in the Freeman Centre				
13.30	Roundtable Discussion in the Medical School Auditorium "What have we learned about Innovation?"				
	Chair: Sidney Winter (University of Pennsylvania)				
	Speakers: Nick von Tunzelmann (University of Sussex) John Bessant (Cranfield University) Jan Fagerberg (University of Oslo)				
14.30	Conference officially concludes				
15.30	Football match at Sports Pavillion				

Saturday, 15th November, 09.00 – 10.30

Parallel Sessions

Freeman Centre

Session ID5 Models of Industrial Evolution
 Chair Anita McGahan (Boston University)
 Discussant Giovanni Dosi (Scuola Superiore Sant'Anna, Pisa)
 Room G25
 Time 9.00-10.30, Saturday, 15th November

Paper 1	Generative Rules and the Emergence of the US Venture Capital Industry	Bruce Kogut (University of Pennsylvania), Gordon Walker (Southern Methodist University) & Pietro Urso (INSEAD)
Paper 2	Does Pavitt's Sectoral Taxonomy of Innovation Map into a Sectoral Taxonomy of Stock Price Dynamics?	Mariana Mazzucato & Massimiliano Tancioni (Open University)
Paper 3	Technical Change, Prices and Communications Technology: Insights from the Local Area Network Industry	Roberto Fontana (Università Bocconi)

Session MI9 Industry-Specific Innovation
 Chair John Bessant (Cranfield University)
 Discussant Simon Collinson (University of Warwick)
 Room G23
 Time 9.00-10.30, Saturday, 15th November

Paper 1	Patterns of Innovation in Spoken Language Engineering Industry	Konstantinos Koumpis (Vodera Research)
Paper 2	Erosion of Industry Leadership in the Face of Seemingly Innocuous Technological Changes: A Study of the Video Game Console Industry	Allan Afuah (University of Michigan) & Rosa Grimaldi (University of Bologna)
Paper 3	Variability in Forms of Organisation in Biotechnology Firms	Terttu Luukkonen (Research Institute of the Finnish Economy)

Session STP5 University-industry Interactions and Innovation
 Chair Frans Berkhout (University of Sussex)
 Discussant Bruno van Pottelsberghe (Université Libre de Bruxelles)
 Room F13
 Time 9.00-10.30, Saturday, 15th November

Paper 1	Research assessment criteria and university-industry links in the social contract of 'applicable' science: Experiences from funding of biomedical science and strategic environmental research in Sweden and the UK	Katarina Larsen (Royal Institute of Technology, Sweden)
Paper 2	Searching Low and High: What Types of Firms use Universities as a Source of Innovation?	Keld Laursen (Copenhagen Business School) & Ammon Salter (Imperial College)
Paper 3	Do Formal Intellectual Property Rights Hinder the Free Flow of Scientific Knowledge?	Fiona Murray (Massachusetts Institute of Technology) & Scott Stern (Northwestern University)

Session MI5 Modularity, Cognition and Innovation

Chair Nick Marshall (University of Brighton)

Discussant Arie Lewin (Duke University)

Room G24

Time 9.00-10.30, Saturday, 15th November

Paper 1	Socio-technical Dynamics Underlying Radical Innovation: The Case of Polaroid's Sx-70 Camera	Raghu Garud (New York University) & Kamal Munir (Judge Institute of Management, Cambridge)
Paper 2	The Values and Costs of Modularity: A Cognitive Perspective	Stefano Brusoni (Università Bocconi), Luigi Marengo (University of Teramo), Andrea Prencipe (Universities of Sussex/ G. D'Annunzio) & Marco Valente (University of Aquila/DRUID)
Paper 3	Successive Cycles of Innovation: The Importance of User Heterogeneity and Design Complementarities for Radical Product Innovations in the Camera and Computer Industries	Paul Windrum (Manchester Metropolitan University & University of Maastricht) & Koen Frenken, (University of Utrecht)

Session INT5 Internationalisation, Technology and Trade

Chair Alex Vera-Cruz (Universidad Autónoma Metropolitana)

Discussant Pari Patel (University of Sussex)

Room G22

Time 9.00-10.30, Saturday, 15th November

Paper 1	Firm Technological Diversification and Technological Internationalisation, Exploring the Nexus: An Empirical Study based on a Large Sample of MNCs.	Christian Le Bas & Karim Touach (University Lyon 2)
Paper 2	Innovation and Competitiveness: Trends in Unit Prices in Global Trade	Raphael Kaplinsky (Universities of Brighton/Sussex) & Amelia Santos Paulino (University of Sussex)
Paper 3	International Competitiveness in Producer Services	Paolo Guerrieri (Rome University 'La Sapienza'/College of Europe) & Valentina Meliciani (University of Teramo)

Saturday, 15th November, 11.00 – 12.30

Parallel Sessions

Freeman Centre

Session ID6 Technology and Industrial Change
 Chair Paul Windrum (Manchester Metropolitan University)
 Discussant Slavo Radosevic (University College London)
 Room G25
 Time 11.00-12.30, Saturday, 15th November

Paper 1	Analysing the Dynamics of Incomplete Technological Substitution: How Swiss Automatic Watch Producers Survived the Quartz	Federico Munari (University of Bologna), Raffaele Oriani (University of Bologna) & Filippo Wezel (University of Tilburg)
Paper 2	Technological Revolutions and Economic Growth: The “Age of Steam” Reconsidered	Carolina Castaldi & Alessandro Nuvolari (Eindhoven University of Technology)
Paper 3	Knowing More or Less in a Knowledge-based Economy? Innovation in the Media Sector	Paschal Preston & Aphra Kerr (Dublin City University)

Session MI8 Knowledge and Firm Structure
 Chair Ammon Salter (Imperial College)
 Discussant Brian Loasby (University of Stirling)
 Room G23
 Time 11.00-12.30, Saturday, 15th November

Paper 1	Organisational Memory for Innovation in Project-based Firms	Eugenia Cacciatori (University of Sussex)
Paper 2	Managing the Innovative Firm: Between the Division of Labour and the Division of Knowledge	Patrick Cohendet & Patrick Llerena (University Louis Pasteur, Strasbourg)
Paper 3	What Transactions to Organise and How to Organise Them: A Dynamic Perspective Towards Modularity	Hank Chesbrough (Haas Business School) & Andrea Prencipe (Universities of Sussex/G D’Annunzio)

Session STP6 Measuring Innovation and Policy: New Tools and Challenges
 Chair Howard Rush (University of Brighton)
 Discussant Richard Torbett (Department of Trade and Industry, London)
 Room F13
 Time 11.00-12.30, Saturday, 15th November

Paper 1	The Debt of Evolutionism to Pavitt’s Methods: Relations between Empirical Outcomes and Theoretical Conclusions	Patrick Eparvier (OECD)
Paper 2	The Rise of Innovation Surveys: Measuring a Fuzzy Concept	Benoît Godin (University of Quebec, Montreal)
Paper 3	A Debate on Innovation Surveys	Monica Salazar & Adam Holbrook (Simon Fraser University)

Session MI6 Performing Innovation
 Chair Fred Tell (Linköping University)
 Discussant Nick Von Tunzelmann (University of Sussex)
 Room G24
 Time 11.00-12.30, Saturday, 15th November

Paper 1	Experience and Scale and Scope Economies: Tradeoffs and Performance in Drug Development	Christopher S. Boerner (Genentech Inc.) & Jeffrey T Macher (Georgetown University)
Paper 2	The Emergence of New Technologies in the ICT Field: Main Actors, Geographical Distribution and Knowledge Sources	Nicoletta Corrocher, Franco Malerba and Fabio Montobbio (Università Bocconi)
Paper 3	Co-evolutionary Dynamics of Efficiency Frontiers, Adaptation, Selection and Innovation	Henrich R. Greve (Norwegian School of Management BI), Arie Y. Lewin (Duke University), Tomoaki Sakano (Waseda University), Lawrence M. Seiford (University of Michigan) & Joe Zhu (Worcester Polytechnic Institute)

Session STP7 National Policy Studies
 Chair William Walker (University of St. Andrews)
 Discussant Jordi Molas-Gallart (University of Sussex)
 Room G22
 Time 11.00-12.30, Saturday, 15th November

Paper 1	The sources of knowledge and the value of academic patents	Elefthérios Sapsalis & Bruno van Pottelsberghe (Université Libre de Bruxelles)
Paper 2	The Swedish ‘Academic paradox’ – Myth or Reality?	Staffan Jacobsson & Annika Rickne (Chalmers University of Technology)
Paper 3	Dual-use Policies in French and European Perspectives	Renelle Guichard (University of Paris Dauphine)