

Final Programme
for the
DRUID Summer Conference 2002 on

**Industrial Dynamics of the New and Old Economy
– who embraces whom?**

Copenhagen, June 6-8, 2002.

[All papers mentioned below are available through the DRUID website at www.druid.dk]

The conference is organized in co-operation with CISTEMA.¹

Day 1: Thursday June 6

12:00-13:45 Arrival, Registration.

12:00-13:30 Lunch

13.45 **OPENING THE CONFERENCE:**
Peter MASKELL, DRUID Research Director

14:00-14:45 **WELCOME LECTURE:**
Keith PAVITT: System Integrators as "post-industrial" firms?

15:00-16:30 **PLENARY SESSION 1:**
**PRODUCTION AND USE OF KNOWLEDGE
IN THE OLD & NEW ECONOMY**

Chair: Keld LAURSEN

- **Dominique FORAY and David HARGREAVES:** The development of knowledge of different sectors: a model and some hypotheses.
- **Michelle GITTELMAN and Bruce KOGUT:** Does Good Science Lead to Valuable Knowledge? Biotechnology Firms and the Evolutionary Logic of Citation Patterns;
- **Benjamin CORIAT, Fabienne ORSI and Olivier WEINSTEIN:** Science Based Sectors and Institutional Arrangements: From Science Based "1" to Science Based "2" Regimes

Discussant 1: Sidney WINTER

Discussant 2: Pier Paolo SAVIOTTI

Coffee break

17:00-18:30 **PLENARY SESSION 2:**

TECHNICAL CHANGE, CORPORATE DYNAMICS AND INNOVATION

Chair Esben Slot ANDERSEN

- **Jacques MAIRESSE** and **Pierre MOHNEN**: Accounting for Innovation and productivity: A Comparison Across Four European Countries
- **Franco MALERBA**: New Challenges for the European Sectoral System of Innovation
- **Finn VALENTIN** and **Rasmus Lund JENSEN**: Reaping the fruits of science. Comparing exploitations of a scientific breakthrough in European innovation systems

Discussant 1: Gunnar ELIASSON

Discussant 2: Hariolff GRUPP

19:00 Dinner

20:30-22:00 **PLENARY SESSION 3:**

THE INTERNET AND THE NEW ECONOMY

Chair: Alice LAM

- **Bo CARLSSON**: The new economy: What is new and what is not?
- **Jens Frøslev CHRISTENSEN, Marie Louise SCHMIDT and Mette Rønberg LARSEN**: Turbulence and competitive dynamics of the Internet consultancy industry
- **Martin KENNEY**: National Exceptionalism?: The Importance of Context in Shaping the Birth of the U.S. Internet Industry

Discussant 1: Bart van ARK

Discussant 2: Richard N. LANGLOIS

Day 2: Friday June 7

09:00-10:30 **PARALLEL SESSIONS 1**

Parallel Session 1-1: Reconstructing Old Sectors in the New Economy.

Chair: Joseph WINDSPERGER

- Jan VANG: Urgent Information Goods and Governance Structures: Messages from the News Industry
- Richard BLUNDEL: Reproducing Artisanal Knowledge in The New Economy. A Case Study of English Farmhouse Cheese Making 1850-2000
- Christopher PALMBERG: The Many Faces of Absorptive Capability in Low-tech Industries – the case of glue-lam timber foodstuffs

Discussant 1: Alessandro NUVOLARI

Discussant 2: Edward W. CONSTANT II

Parallel Session 1-2: Learning and Organization

Chair: Jesper Lindgaard CHRISTENSEN

- Richard N. LANGLOIS: Cognitive Comparative Advantage and the Organization of Work: Lessons from Herbert Simon's Vision of the Future (Lead paper)

- Alice LAM: Alternative Societal Models of Learning and Innovation in the Knowledge Economy
- Michel QUERE and Pier Paolo SAVIOTTI: Knowledge Dynamics and the Organization of Life Science Industries

Discussant 1: Brian LOASBY

Discussant 2: Stefano BRUSONI

Parallel Session 1-3: Productivity, ICT and input-output economics

Chair: Gert Villumsen

- Bart VERSPAGEN: Structural Change and Technology. A Long View
- Bart van ARK, Robert INKLAAR and Robert H. McGUICKIN: 'Changing Gear'. Productivity, ICT and Service industries: Europe and the United States.
- Gunnar ELIASSON, Dan JOHANSSON and Erol TAYMAZ: Simulating The New Economy

Discussant 1: Keld LAURSEN

Discussant 2: Pierre MOHNEN

Parallel Session 1-4: The Development of Technology Clusters

Chair: Elisa GIULIANI

- Bent DALUM, Christian Ø.R. PEDERSEN and Gert VILLUMSEN: Technological Life Cycles: Regional Clusters Facing Disruption
- Gil AVNIMELECH and Morris TEUBAL: Venture Capital – Start-Up Co-Evolution and the Emergence & Development of Israel's New High Tech Cluster
- Dieter ERNST: Digital information systems and global flagship networks: How mobile is knowledge in the global network economy?

Discussant 1: Virginia ACHA

Discussant 2: Alfonso GAMBARDELLA

Parallel Session 1-5: Market Structure and Appropriability

Chair: Stuart GRAHAM

- Jean-Michel DALLE: Open Code: The Sources of Open-Source Innovation
- Elad HARISON and Robin COWAN: On Substitution of Intellectual Property and Free Disclosure: An Ex-ante Analysis of R&D Strategies in Software Technologies.
- Giampaolo GARZARELLI: The Pure Convergence of Knowledge and Rights in Economic Organization: The Case of Open Source Software Development

Discussant 1: Maria BROUWER

Discussant 2: Aija LEIPONEN

Parallel Session 1-6: Industry Innovation

Chair: Thorbjørn KNUDSEN

- Tessa AVERMAETE: On Innovation and Meeting Regulation: The Case of the Belgian Food Industry
- Lars FREDERIKSEN: Organisation of innovation in creative industries: An analysis of the dynamics of the music industry

- Harry BLOCH and Jo VOOLA: Strategic Interactions and Industry Dynamics: A Case Study of the Effects of Advanced Upstream Seismic Technologies on the Petroleum Industry.

Discussant 1: Jens Frøslev CHRISTENSEN

Discussant 2: Franco MALERBA

Coffee break

11:00-12:30 **PLENARY SESSION 4:**

TERRITORIAL ORGANIZATION AND THE NEW ECONOMY

Chair: Bent DALUM

- **Maryann FELDMAN:** Locational dynamics of the biotech industry.
- **Timothy BRESNAHAN, Alfonso GAMBARDELLA and Annalee SAXENIAN:** 'Old Economy Inputs for 'New Economy Outputs: Rise and Growth of the New Silicon Valleys
- *Discussant 1* Morris TEUBAL
- *Discussant 2:* Mark LORENZEN

12:30 Lunch

13:30-16:15 Excursions or walk on the beach (or watching football)

Coffee

16:30-18:00 **PARALLEL SESSIONS 2**

Parallel Session 2-1: The Use of Knowledge in the Service Sector

Chair: Luc SOETE

- Ina DREJER: Business Services as a Production Factor
- Erik BAARK: Engineering Services: Emerging Patterns of Knowledge Creation
- Jane MARCEAU and Cristina MARTINEZ: Selling Solutions: Product-Service Packages as Links Between New and Old Economies

Discussant 1: Olavi LEHTORANTA

Discussant 2: Marva CORLEY

Parallel Session 2-2: The Role of Innovation in Corporate Dynamics

Chair: Tine AAGE

- John CANTWELL and Grazia D. SANTANGELO: The Boundaries of Firms in the New Economy: The Impact of M&As on Corporate Technological Profiles
- Mette Præst KNUDSEN and Thorbjørn KNUDSEN: Unfolding the Industry Dynamics
- Heinz HOLLENSTEIN: Determination of the Adoption of Information and Communication Technologies (ICT)

Discussant 1: Jacques MAIRESSE

Discussant 2: Peter LOTZ

Parallel Session 2-3 : Uncertainty, Knowledge Creation and Industrial Dynamics

Chair: Bengt-Åke LUNDVALL

- John MATHEWS: Schumpeterian competitive dynamics and economic learning: An economy-wide resource-based view.
- Brian J. LOASBY: Options and Evolution (Lead paper)
- Edward W. CONSTANT II: How Old becomes New: The Social Production and Authentication of communal Knowledge

Discussant 1: Dominique FORAY

Discussant 2: Mark TOMLINSON

Parallel Session 2-4: The Dynamics of Regional Clusters

Chair: Lars Bo JEPPESEN

- Luciana LAZZERETTI: Competition, predatory competition and symbiosis interdependencies in industrial districts: A multi-population analysis of Prato 1946-1998
- Ana SANTACREU-GIL: How the innovative capacity of firms can generate endogenous growth in a region composed of SMEs
- Mark LORENZEN: Global Strategy and the Acquisition of Local Knowledge: How MNCs Enter Regional Knowledge Clusters"

Discussant 1: Maryann FELDMAN

Discussant 2: Esben Slot ANDERSEN

Parallel Session 2-5: Collaboration and Control of Knowledge

Chair: George RICHARDSON

- Brian KAHIN: Public Policy and the Political Economics of Knowledge (Lead Paper).
- Birgitte ANDERSEN: The Performance of the IPR System in the New Economy: Implications for Digital Inventions and Business Methods
- Aija LEIPONEN: Intellectual Property and Innovation in Business Services: Implications for the Management of Knowledge and Supply Relationships

Discussant 1: Giampaolo GARZARELLI

Discussant 2: Lee DAVIS

Parallel Session 2-6: Interfirm Interaction

Chair: Michel QUERE

- Robin COWAN and Nicolas JONARD: Invention on a Network
- Nicholas S. VONORTAS and John HAGEDOORN: Alliance Cycles
- Henrich DAHLGREN: Networks, Information and the Creation of Markets

Discussant 1: Robert INKLAAR

Discussant 2: Sidney WINTER

Coffee

18:15-19:45 **PLENARY SESSION 5:**
NEW COMPETITION POLICIES AND
INTELLECTUAL PROPERTY RIGHTS

Chair: Peter LOTZ

- **David C. MOWERY** and **Stuart GRAHAM**: Submarines and Strategy in Firms' Intellectual Property Portfolios: Continuations in Software Patents
- **Eric BROUSSEAU**: Internet Regulation: Does Self-Regulation Require an Institutional Framework ?
- **Lee DAVIS**: Should We Consider Alternative Incentives for Basic Research? Patents vs. prizes

Discussant 1: Birgitte ANDERSEN

Discussant 2: Markus REITZIG

20:00 Conference dinner

Day 3: Saturday June 8

09:00-10:30 **PARALLEL SESSIONS 3**

Parallel Session 3-1: New Models of Economic Organization of Knowledge

Chair: Henrich DAHLGREN

- Mona Domaas WIBE and Rajneesh NARULA: Interactive Learning and Non-Globalisation: Knowledge Creation by Norwegian Software Firms
- Tina Brandt HUSMAN: New Conditions in a New Economy? The Prosperity of the Project-Based Organisation.
- Josef WINDSPERGER: The Organization of Knowledge in Franchising Firms

Discussant 1: Alice LAM

Discussant 2: Maureen McKELVEY

Parallel Session 3-2: Technological Trajectories

Chair: Dan MARSH

- Antonio D'AGATA: Localised technical progress and choice of technique in a linear production model
- Fabrice GALIA and Diègo LEGROS: Complementarities between Obstacles to Innovation: Empirical Study on French Data Set.
- Nils STIEGLITZ: Industry Dynamics and Types of Convergence: the Evolution of the Personal Digital Assistant Market in the 1990s and Beyond

Discussant 1: Bart VERSPAGEN

Discussant 2: Toke REICHSTEIN

Parallel Session 3-3: The Role of ICT in Corporate Dynamics

Chair: Mette Præst KNUDSEN

- Olavi LEHTORANTA: Analysing the Dynamics of the New Economy Enterprises
- Sandro MENDONCA: ICT Capabilities Among the World's Largest Companies: Is there an Underestimation and a Bias?
- Koen DITTRICH: The Evolution of Innovation Networks in the Global ICT Industry

Discussant 1: Martin KENNEY

Discussant 2: Heinz HOLLENSTEIN

Parallel Session 3-4: Knowledge Flows within Regional Clusters

Chair: Jan VANG

- Michael S. DAHL: Embedded knowledge flows through labor mobility in regional clusters in Denmark
- Fiorenza BELUSSI: Industrial Districts: Networks without Technologies? The Diffusion of Internet Applications in the three Northeast Industrial Districts of Italy: Results from a Survey.
- Elisa GIULIANI: Cluster absorptive capability: An evolutionary approach for industrial clusters in developing countries

Discussant 1: Kenneth L. SIMONS

Discussant 2: Ana SANTACREU-GIL

Parallel Session 3-5: Growth and Policy

Chair: Henrik SORNN-FRIESE

- Leiner VARGAS and Klaus LINDEGAARD: New Economies and Innovation for Developing Countries. The Case of Intel in Costa Rica.
- Claudia Ines CHAMAS: Management of Intangible Assets at Brazilian Universities

Discussant 1: Luc SOETE

Discussant 2: Gabriel YOGUEL

Parallel Session 3-6: Innovation and Economic Development

Chair: Erik BAARK

- Hariolff GRUPP, Iciar Dominguez LAASA and Minica FRIDRICH-NISHIO: Innovation and Growth in Germany in the Past 150 Years
- Pier Paolo SAVIOTTI and Andreas PYKE: Economic development, Qualitative Change and Employment Creation
- Birgitte ANDERSEN and Marva CORLEY: The Theoretical and Empirical Impact of The Service Economy: A Critical Review

Discussant 1: Eric BROUSSEAU

Discussant 2: John MATHEWS

Coffee break

11:00-12:30 PARALLEL SESSIONS 4

Parallel Session 4-1: Measuring and Comparing Features in Traditional and New Sectors

Chair: Toke REICHSTEIN

- Mark TOMLINSON: Measuring Competence and Knowledge using Employee Surveys: Evidence using the British Skills Survey of 1997
- Virginia ACHA and Stefano BRUSONI: Knowledge on Wheels: new lessons from the tire industry.
- Alessandro NUVOLARI and Bart VERSPAGEN: 'Unravelling the Duty': Lean's Engine Reporter and the Dynamics in Steam Power Technology

Discussant 1: Michelle GITTELMAN

Discussant 2: Bo CARLSSON

Parallel Session 4-2: Organization of Industry

Chair: Ina DREJER

- John H. FINCH and Nicola C. DINNIE: Reshaping Connections Between Corporate Routines, Know-how and Know-that. The Case of Companies Operating in the Upstream Oil and Gas Industry
- Lionel NESTA and Ludovic DIBIAGGIO: Knowledge organisation and Firms' specialisation in the biotech industry
- Dan MARSH: What Drives Innovation in the New Economy? The case of the New Zealand Biotechnology Sector.

Discussant 1: Robin COWAN

Discussant 2: Grazia Domenica SANTANGELO

Parallel Session 4-3: The Internet as a Foundation of the New Economy

Chair: Michael S. Dahl

- Lars Bo JEPPESEN: Organizing value in the on-line age
- Andrea BONACCORSI, Cristina ROSSI, Irma SERRECCHIA and Maurizio MARTINELLI: Measuring and modelling Internet diffusion using second level domains: The case of Italy
- Kenneth L. SIMONS: Information technology and the dynamics of firm and industrial structure

Discussant 1: Jesper Lindgaard CHRISTENSEN

Discussant 2: Luciana LAZZERETTI

Parallel Session 4-4: Regional and Structural change

Chair: Mark LORENZEN

- Magnus HOLMÉN and Maureen McKELVEY: How and Why to Systematically Study Regional Renewal? Case Studies in Swedish Regions
- Deborah TAPPI: Changing Structure - Keeping Location: Towards a Theory of the Evolution of Local Clusters
- Facundo ALBORNOZ, Dario MILESI and Gabriel YOGUEL: New Economy in old sectors: Some issues coming from two production networks in Argentina

Discussant 1: Henrik SORNN-FRIESE

Discussant 2: Christopher PALMBERG

Parallel Session 4-5: Patenting Strategies

Chair: Benjamin CORIAT

- Maria BROUWER: Insiders and Outsiders – The Rewards of Innovation
- Markus REITZIG: The Private Values of “Thicket” Patenting: An Empirical Study Across Industries and Patent Types
- Henrique BARROS and Paul STONEMAN: Patents and Pharmaceuticals in the UK: In Insight into the Patenting Process

Discussant 1: David C. MOWERY

Discussant 2: Jean-Michel DALLE

Parallel Session 4-6: Knowledge, Growth and Policy

Chair: Patricia PLACKETT

- Paola CRISCUOLO and Rajneesh NARULA: A Novel Approach to National Technological Accumulation and Absorptive Capacity: Aggregating Cohen & Levinthal
- Jan FAGERBERG and Jarle HILDRUM: Knowledge, Globalization and Growth: In Search of a Useful Theory
- Deniz Eylem YORUK and Nick von TUNZELMANN: Network Realignment and Appropriability in the CEE Food Industry

Discussant 1: Finn VALENTIN

Discussant 2: Olivier WEINSTEIN

12:30 Lunch

13:30-15:00 **CONCLUDING PLENARY ROUNDTABLE DISCUSSION:**

**BENCHMARKING NATIONAL INNOVATION SYSTEMS AND
RTD-POLICY LEARNING IN EUROPE**

**Consequences and recommendations for industrial and
technology policies in the wake of the Danish EU Presidency.**

Opening remarks by **Bengt-Åke LUNDVALL**.

Nikolaos KASTRINOS, European Commission, DG RTD: Benchmarking science, technology and RTD policy at the European level

David MOWERY, Berkeley University: On inter-regional policy emulation in the RTD-area - what can Europe learn from the US experience

Dominique FORAY, OECD: Benchmarking public policy in the knowledge based economy - the OECD experience.

Kim BRINCKMANN, Ministry of Science, Technology and Innovation: New directions for Danish RTD policy - what impact from international benchmarking?

Jens NYHOLM, Ministry of Economics and Industry: New directions in Danish growth promoting policies - what impact from international benchmarking?

Followed by 45 minutes debate on policy issues of concern to members of the audience and on three specific questions:

- What lessons can Europe learn from US RTD-policy?
- How should cross national benchmarking be designed in order to take into account the systemic character of innovation and avoid naive copying of so-called 'best-practise'?
- How should the process of cross national benchmarking be organised in order to promote the open method of co-ordination at the European level in the field of innovation and competence building?

15:00-15:30 **Closing the conference**

15:30 Departure

Basic format of all sessions (plenary as well as parallel)

Each session normally include three papers and lasts about one and a half hour. The standard time schedule looks like this:

- First paper presentation by the author = 15 minutes
- Second paper presentation by the author = 15 minutes
- Third paper presentation by the author = 15 minutes
- First discussant of all three papers = 12 minutes
- Second discussant of all three papers = 12 minutes
- General discussion and replies from the authors = approximately 20 minutes.

Please note that overhead projectors are the standard tool for all presenters, also in plenary sessions. PowerPoint shows should thus be transferred to transparencies when at all possible and projectors for computer screens will normally not be available. Please consult the conference secretariat if PowerPoint shows or other computer screen facilities is really needed.

¹CISTEMA (Center for Inter-disciplinary studies in Technology Management) is a research consortium consisting of researchers and research teams within the field of Management of Technology at Copenhagen Business School. CISTEMA was established in 1993 and has recently received new funding from the Danish Social Science Research Council for a 3-year period. CISTEMA is headed by Jens Frøslev Christensen who is also member of the DRUID board. At present CISTEMA is providing financial support for research projects on scientification of technological development (Finn Valentin), knowledge externalities and appropriability (Lee Davis) and corporate management of technology in the "old" and "new economy (Jens Frøslev Christensen, Volker Mahnke)