

Nicolas Carayol - Vita, May 2009

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- Personal information : French citizenship, marital life, one child (Guilhem).

Academic positions

Current positions

- Professor of economics, Université Bordeaux Montesquieu IV, Avenue Leon Duguit, F-33608 Pessac Cedex.
- Research fellow at GREThA, CNRS & Université Bordeaux Montesquieu IV.
- Associate research fellow at OST (since Sept 2007), Observatoire des Sciences et Techniques, 93 rue de Vaugirard, F-75006 Paris.

Past positions

- Assistant Professor (Maître de Conférences), Université Paris-Sud (Paris 11 - Orsay), February 2005-August 2008.
- CNRS Post-Doctoral Research Fellow, BETA (Bureau d'Économie Théorique et Appliquée), UMR CNRS 7522, University Louis Pasteur, October 2002 - January 2005.
- Post-Doc, University Louis Pasteur, Strasbourg, January-September 2002.
- Attaché Temporaire de Recherche (ATER), University of Toulouse 1, October 2000 - September 2001.
- Allocataire Moniteur, University of Toulouse 1, October 1997 - September 2000.

Degrees

Ph.D

- Title : Properties and failures of open science. Essays in the economics of 'imperfect science'. Realized under the supervision of Professor Jean-Michel Plassard (University of Toulouse 1) (1997-2001).
- Obtained with highest honors. External defense committee members : Paul David (Stanford University and Oxford University, All Souls College), Patrick Llerena (University Louis Pasteur) and Alan Kirman (EHESS, Institut Universitaire de France and Aix-Marseille University).

Other degrees

- Master in Industrial and Labour Economics at the University of Toulouse 1, Ranked First (1997).

- Graduated in Economics, in Political Sciences and in Sociology at the University of Toulouse 1 (1995-1996).

Teaching experiences

Undergraduate level

- Microeconomics (2008-present), Second year, Faculty of Economics and management, Université Bordeaux Montesquieu.
- Economic dynamics and strategic interactions (2008-present), Undergraduate level, Third year, Faculty of Economics and management, Université Bordeaux Montesquieu.

Graduate level

- International Economics I (2004-06) : L3, Université Paris Sud, Faculté Jean Monnet.
- Microeconomics (2003-04) : Ecole et Observatoire de Physique du Globe de Strasbourg.

Post-graduate level

- Analyzing and modeling social and economic networks (2008-present), Second year of Master MIMSE, Université Bordeaux Montesquieu, Université Bordeaux 1 & Université Bordeaux 2.
- Research and modeling seminar on the empirics and modeling of networks (2008-present), Second year of the Masters in Economics, Université Bordeaux Montesquieu.
- Game Theory (2008-present), First year of Master MIMSE, Université Bordeaux Montesquieu, Université Bordeaux 1 & Université Bordeaux 2.
- Economic dynamics (2008-present), First year of Master MIMSE, Université Bordeaux Montesquieu, Université Bordeaux 1 & Université Bordeaux 2.
- Industrial organization and regulation (2008-present), First year of Master MIMSE, Université Bordeaux Montesquieu, Université Bordeaux 1 & Université Bordeaux 2.
- Economics of Science and Innovation (2006-present) : Second year of the Masters in Economics, Université Paris Sud, Faculté Jean Monnet.
- Managerial Economics (2005-07) : Second year of Masters in Management, Université Paris Sud, Faculté Jean Monnet.
- International Economics (2004-07) : First year of Masters in Management, Université Paris Sud, Faculté Jean Monnet.
- Economic Analysis (2004-05) : Masters 2, Univ. Louis Pasteur (Faculty of Mathematics and Computer Sciences).

Ph.D. summer schools

- Knowledge, Science and Innovation, Aix en Provence, GREQAM, Octobre 2007, cours “New trends in the economics of science”.
- European Summer School on Industrial Dynamics (ESSID),
 - Sept. 2007 : “Measuring scientific production”.
 - Sept. 2006 : “Measuring (and understanding) scientific productivity and networks (formation)”.
- European School on New Institutional Economics (ESNIE),

- May 2007 : “Strategic Network Formation and the way it can be used on applied issues”.
- May 2006 : Ph.D. workshop co-organizer.

Contributions to research activity and organization

Editorial Service

- Associate Editor of Journal of Information Economics and Policy (Since Sept 2007).
- Referee for Advances in Complex Systems, Canadian Journal of Economics, Economie et Prévision, European Management Review, Industrial and Corporate Change, Information Economics and Policy, International Journal of Game Theory, Journal of Economic Behavior and Organization, Journal of Technology Transfer, Papers in Regional Science, Physics Letters-A, Research Policy, Social Choice and Welfare.

Funded projects (as principal investigator)

- Project DYN-NET (Dynamics of Networks), funded 70,000 euros by the Agence Nationale de la Recherche (ANR, Programme Blanc Jeunes chercheurs, Jeunes Chercheuses), 2007-2009, coordinator.
- Scientific and technologic knowledge production in the academe : The case of the Université Paris Sud, funded 8,000 euros by the University Paris Sud - BQR (Bonus Qualité Recherche), 2006, coordinator.

Collaborations to research projects

- Ongoing projects :
 - Dime (Dynamics of Institutions and Markets) - EU Network of Excellence,
 - Prime (Science and Technology Policy in Europe) - EU Network of Excellence,
 - Project Genomics, funded by the ANR (Agence Nationale de la Recherche),
 - Project Ancora (Economics of Science), funded by the ANR (Agence Nationale de la Recherche).
- Past projects :
 - Project Ineck (Innovation, Networks and Knowledge) - EU Thematic network,
 - Project Nprnet (New Policy Rationales for the support of public research in the European Union) - EU Strata,
 - Project Sesi (Higher Education and Research Systems and Innovation) - EU Tser,
 - Project Innovation et proximité, mesures et modèles sur données de relation, funded by the ACI - Espace et territoire,
 - Projet logiciels libres, funded by the Réseau National de Recherche sur les Technologies Logicielles.

Organization of regular seminars

- Economics Research seminar, ADIS (2006 and 2007)
(cf. <http://www.adislab.net/seminaires/seminaires-2006-2007/>),
- Seminar Economics of Innovation and Science, BETA (2003)
(cf. <http://cournot2.u-strasbg.fr/EEAAS/carayol/seminar.htm>).

Organization of international conferences

- Dime international conference on the formation of economics and social networks, 25-27th June 2009 (cf. <http://www.icfsn.net/>),
- The Formation of Social Networks, June 2007,
- The Empirical Economics of the Academic Sphere, March 2004 (cf. <http://cournot2.u-strasbg.fr/EEAAS/workshop.htm>).

Member of conferences committees

- DRUID Summer Conference 2006 & 2007, Copenhagen,
- EMAEE conference 2005, Utrecht.

Miscellaneous

- Direction of students research works at the post graduate level (in co-direction with P.Llerena, F. Laisnay, B. Bellon and S. Saussier).
- Elected student member of the scientific council of the University of Toulouse 1 (from 1997 to 2000).

Research papers

Research interests

- The Economics of Science.
- Network Formation and Dynamics.

Publications in peer reviewed journals

1. Knowledge flows and the geography of networks. The strategic formation of small worlds, *Journal of Economic Behavior and Organization* 71, 2009, 414-427, with Pascale Roux.
2. In search of efficient network structures : The needle in the haystack, *Review of Economic Design* 11, 339-359, 2008, with Pascale Roux and Murat Yildizoglu.
3. Inefficiencies in a model of spatial networks formation with positive externalities, *Journal of Economic Behavior and Organization* 67, 495-511, 2008, with Pascale Roux and Murat Yildizoglu.
4. The strategic formation of inter-individual collaboration networks. Evidence from co-invention patterns, *Annals of Economics and Statistics/Annales d'Economie et de Statistiques* 87-88, 275-302, 2008, with Pascale Roux.
5. The private contractual funding of academic laboratories : A panel data analysis, *Applied Economics Letters* 15 (6), 2007, 465-468 with Rachid Boumahdi and Patrick Llerena.
6. Sequential problem choice and the reward system in the Open Science, *Structural Change and Economic Dynamics* 18, 167-191, 2007, with Jean-Michel Dalle.
7. Academic incentives and research organization for patenting at a large French university, *Economics of Innovation and New Technology* 16 (2), 119-138, 2007.
8. La production de brevets par les chercheurs et enseignant-chercheurs. Le cas d'une grande université de recherche française, *Economie et Prévision* 175-176, 117-134, 2006.

9. Les propriétés incitatives de l'effet Saint-Matthieu dans la compétition académique, *Revue Economique* 57 (5), 1033-1051, 2006.
10. Individual and collective determinants of academic scientists' productivity, *Information Economics and Policy* 18, 55-72, 2006, with Mireille Matt.
11. Patent production at a European research university : Evidence at the laboratory level, *Journal of Technology Transfer* 31 (2), 257-268, 2006, with Joaquin Azagra-Caro and Patrick Llerena.
12. Self-organizing innovation networks : When do Small Worlds emerge?, *European Journal of Economic and Social Systems* 18 (2), 307-332, 2005, with Pascale Roux.
13. Why do academic scientists engage in interdisciplinary research?, *Research Evaluation* 14, 70-79, 2005, with Thuc Uyen Nguyen Thi.
14. Does research organization influence academic production? Laboratory level evidence from a large European university", *Research Policy* 33, 1081-1102, 2004, with Mireille Matt.
15. Behavioral foundations and equilibrium notions for social network formation processes, *Advances in Complex Systems* 7 (1), 77-92, 2004, with Pascale Roux.
16. The exploitation of complementarities in the scientific production process at the laboratory level, *Technovation* 24 (6), 455-465, 2004, with Mireille Matt.
17. Objectives, agreements and matching in science-industry collaborations : Reassembling the pieces of the puzzle, *Research Policy* 32 (6), 887-908, 2003.
18. Modeling creation vs. diffusion of structured knowledge, *Advances in Complex Systems* 3, 353-370, 2000.
19. Quelle finalisation 'appropriée' des savoirs scientifiques?, *Sciences de la Société* 49, 179-190, 2000, with Marie-Pierre Bès.

Publications in books and conference proceedings

- 20 An economic theory of academic competition : Dynamic incentives and endogenous cumulative advantages, in : Scientific Competition, M. Albert, Schmidtchen D. and S. Voigt (eds.), *Conferences in New Political Economy* 25, Tuebingen : Mohr Siebeck (forthcoming 2008).
- 21 'Collective innovation' in a model of network formation with preferential meeting, in Lux T., Reitz S., Samanidou E., (eds), *Nonlinear Dynamics and Heterogeneous Interacting Agents, Springer Lecture Notes in Economics and Mathematical Systems*, Springer, 139-153, 2005, with Pascale Roux.
- 22 Micro-grounded models of complex network formation, in : Triboulet P. (ed), *Modélisation de réseaux et diffusion des connaissances*, INRA-Toulouse, 49-69, 2004, with Pascale Roux.
- 23 Modeling creation vs. diffusion of structured knowledge, in G. Ballot and G. Weisbuch (eds), *Simulations in the Social Sciences*, Hermes, pp. 353-368, 2000.
- 24 The diversity of science-industry relations and insights from the compatibility of research agendas, Proceedings of the conference "Economics of Technology and Institutional Change", 2001.

Research papers

- 25 Optimal Dynamic Incentives in the Academic Competition, under revision.

- 26 An economic theory of academic competition : Dynamic incentives and endogenous cumulative advantages.
- 27 Dominance relations and citation classes. A ranking exercise on French Universities, with Agénor Lahatte.
- 28 Who's Who in Patents. A Bayesian approach, with Lorenzo Cassi.
- 29 The formation of bridging relations in inter-individual research collaboration networks, with Lorenzo Cassi and Pascale Roux.
- 30 Public and private funding of academic laboratories : Crowding out evidence from a large European research university, with Rachid Boumahdi.
- 31 The allocation of software development resources in Open Source mode, with Paul David and Jean-Michel Dalle.

Communications in conferences and regular seminars

International Conferences

- French Presidency Conference, Knowledge for growth, Toulouse, July 8th, 2008, presentation of [27].
- ENIP (European Network of Indicators Producers) Conference, Oslo, May 2008, presentation of [27].
- International conference on the formation of social networks, Carré des Sciences, Paris, June 28-29th, 2007, presentation of [4].
- Conference “Economics and historical approaches to the understanding of university research behaviour”, ICER - Villa Gualino, Turin, June 6th, 2007, *invited speaker*, presentation of [6].
- Complexity Conference, Aix en Provence, 17-21 May 2006, *solicited presentation* of [1].
- 24th Conference on New Political Economy : Scientific Competition. Theory and Policy, Saarbrücken, 12-16 October 2005, *invited speaker*, presentation of [20].
- Conference “University-Industry Knowledge Transfer Instruments : Scientific Publications and Patents”, Lausanne, 29-30 September 2005, Ecole Polytechnique Fédérale de Lausanne (EPFL), *invited speaker*, presentation of [?].
- Agent-Based Models for Economic Policy Design (ACEPOL05), Bielefeld, 1-2 July 2005, presentation of [3].
- Society for the Advancement of Economic Theory, Session on Networks organized by M. Jackson (Stanford University), Vigo, 28-2 July 2005, *solicited presentation* of [1].
- Public Economic Theory Conference, Greqam, Université de la Méditerranée, Marseille, 16-18 June 2005, presentation of [30].
- EMEAE Conference (European Meeting on Evolutionary Applied Economics), Utrecht, 19-21 May 2005, presentation of [1].
- European Economic Association Congress, Univ. Carlos III, Madrid, 20-24 August 2004, presentation of [1].
- The Observatory of the European University, Pisa, 16-17 July 2004, *invited speaker*, presentation of [7].
- Applied Econometrics Association Conference, “Innovation and intellectual property, economic and managerial perspectives”, INSEAD, Singapore, 15 July 2004, presentation of [7].
- 4th Proximity Congress, “Proximity, Networks and Co-ordination”, GREQAM, IDEP, LEST, Marseille, 17-18 June 2004, presentation of [1].

- International J.A. Schumpeter Society Conference, Bocconi Univ., Milan, 9-12 June 2004, presentations of [1] and [5].
- 3rd EPIP meeting, “What motivates inventors to invent?”, Scuola Superiore Sant’Anna, Pisa, 2-3 April 2004, presentation of [7].
- Conference “Science and Markets”, University of Lausanne, Lausanne, 19-20 February 2004, *invited speaker*, presentation of [5].
- International Conference on Computing in Economics and Finance, Seattle (WA), 11-13 July 2003, presentation of [15].
- Complexity conference, Paris, 16 June 2003, presentation of [12].
- 8th WEHIA conference (Workshop on Economics with Heterogeneous Interactive agents), Kiel, 29-31 May 2003, presentation of [21].
- EMEAE conference (European Meeting on Evolutionary Applied Economics), Augsburg, 10-12 May 2003, presentation of [14].
- Conference ‘Rethinking Science Policy : Analytical Frameworks for Evidence-Based Policy’, SPRU, University of Sussex, Brighton, 21-23 March 2002, presentation of [?].
- ETIC Conference (Economics of Technology and Institutional Change), Université Louis Pasteur, Strasbourg, 16-18 October 2001, presentation of [24].
- EGOS conference (European Group for Organizational Studies), Lyon, 5-7 July 2001, presentation of [?].
- 8th CCC Conference, Duke University, Fuqua School of Business, Durham (NC), 27-29 April 2001, presentation of [17].
- 2nd International Conference on Computing and Simulation in Social Sciences, Paris, 18-20 September 2000, presentation of [23].
- 5th WEHIA conference (Workshop on Economics with Heterogeneous Interactive agents), GREQAM, Marseille, 15-17 June 2000, presentation of [6].
- EAEPE conference (European Association for Evolutionary Political Economy), Prague, 4-7 November 1999, presentation of [23].
- EAEPE conference (European Association for Evolutionary Political Economy), Lisbon, 7-8 November 1998, presentation of “The evolution of scientific knowledge. A self-organization model”.

National Conferences

- 23èmes Journées de Microéconomie Appliquée, Nantes, 1-2 June 2006, presentation of [1].
- AFSE (Association Française de Sciences Economiques) Congress, Université Paris 1, Panthéon Sorbonne, Paris, 15-16 September 2005, presentation of [30].
- AFSE (Association Française de Sciences Economiques) Congress, Université Paris 1, Panthéon Sorbonne, Paris, 16-17 September 2004, presentation of [13].
- 21èmes Journées de Microéconomie Appliquée, Lille, 27-28 May 2004, presentation of [1].
- Journées de l’AFSE (Association Française de Sciences Economiques), “Economie : aide à la décision publique”, Crereg, Université de Rennes 1, Rennes, 18-19 May 2004, accepted presentation of [8].
- 20èmes Journées de Microéconomie Appliquée, LAMETA, Montpellier, 5-6 June 2003, presentation of [20].
- 19èmes Journées de Microéconomie Appliquée, CREREG, Rennes and Saint-Malo, 6-7 June 2002, presentation of [9].
- SÉSAME, CREUSET, Saint-Étienne, 8-10 September 1999, presentation of [23].

Seminars

- Université Paris Dauphine, presentation of [4].
- GREQAM, presentation of [20]
- Large Networks Seminar, Jussieu (Paris 6), presentation of [1].
- Maison des Sciences Economiques, Paris 1, presentation of [12].
- Journées du BETA, Université Louis Pasteur, presentation of [20].
- LIRHE, Université Toulouse 1, presentation of [6].
- CREREG, Université Rennes 1, presentation of [6].

Non academic valorization of research activities

- Seminar REPERES at the French Ministry of National Education and Research, 14th march 2006, presentation of [30].
- Seminar REPERES at the French Ministry of National Education and Research, 18th June 2003 : “L’activité de recherche d’une grande université française”.
- Member of the Group 1 (“Excellence scientifique et technologique”) of project FUTURIS of the French National Institute of Prospective.