

Gabrielle DEMANGE

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Education

Ecole normale supérieure, Mathematics, 1973-78, France.

École nationale de la statistique et de l'administration économique (ENSAE), 1977-79.

Agrégation de Mathématiques, 1976.

Thèse de 3eme cycle 1980, Thèse d'Etat Paris IX, 1986.

Present and Past Positions

Present position : Directeur d'Etudes at EHESS, 1990-.

Associate Chair Paris School of Economics, 2006-

Past positions:

Assistant Professor, Paris VI University, 1977-1985.

Maître de Conférences, Paris I University, 1986-1987.

Professor, Paris XIII University, 1988-1990.

Maître de Conférences at the Ecole Polytechnique, 1986-1999.

Research: Laboratoire d'économétrie de l'Ecole Polytechnique, 1980-1990, Delta then PSE, 1990-

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Fellowship/Honors

Elected Member of the American Academy of Arts and Sciences 2019-.

CNRS Silver medal 2015.

Elected Member of Academia Europea, 2012-.

Economic Theory Fellow, Society for the Advancement of Economic Theory, 2011-.

Member of the CESifo Network, 2006-.

Game Theory Society charter member.

CEPR Research Fellow, 1997-.

Fellow of the Econometric Society, 1992-.

Selected Activities

Executive Vice President of the Game Theory Society 2022-2024

Elected member at the Council of the Econometric Society 2020-2023

Elected member of the Regional Standing Committee of the Econometric Society for the European region 2019-2023

Fellows Nominating Committee of the Econometric Society, 1999, 2008, 2019, 2023.

Member of the Group of Economic Advisers for the European Securities and Markets Authority (ESMA) December 2018- November 2021.

Member of the Scientific committee of La Fondation du Risque (FDR) 2019-2022

International Advisory Board BEAT, Universitat de Barcelona 2017-.

Coopted member of the board of the Fondation Banque de France 2016 -2019.

Member of the scientific council of the Fondation Banque de France 2012-2015.

Council member of the Society for Social Choice and Welfare, 2008-2013.

Member of the committee "Sciences économiques" Fonds de la Recherche Scientifique – FNRS Belgium 2008-2010.

Game Theory Society council member, 2006-2009.

Member of the EEA Nominating Committee, 2002.

Scientific Council of Laboratoire Européen Associé GREQAM (Marseille), CORE (Louvain) and the GRECA (Barcelone) 2001-2007.

Conferences Organization

Co-organizer with G. Vuillemy of “Central Clearing and Market Infrastructures: New Challenges”, June 5-6 2023, Supported by ANR FIRR.

Co-organizer with A. Galichon, R. Mc Cann and L. Samuelson of "Competitive Equilibrium with Gross Substitutes, with Applications to Problems in Matching, Pricing, and Market Design" May 11-15 2020 (ICERM), Brown University [became virtual]

Co-organizer with G. Vuillemy of ‘The economics of central clearing: New directions’, 22nd May, 2019, Supported by ANR FIRR.

Coordinator for the European Meeting of the Econometric Society, Economic Theory, (ESEM 2018), Cologne, 2018.

Member of the committee of Women in Economics, European Economics Association 2016-2019

Organizer of ‘Rating, Ranking, and Recommendation systems’, December 18-20 2014, Supported by ANR NET

Co-organizer with F. Bloch of ‘Networks and Linkages’ September 25 2013, Supported by ANR NET and DynaMITE

Co-organizer with F. Koessler of “Communication and Beliefs Manipulation”, June 7 – 8, 2012, Supported by ANR NET

Co-organizer of a Joint Workshop ESSEC-HEC-INSEAD-PSE, 2003 -2010.

Chairman of the European Meeting of the Econometric Society, Economic Theory, (ESEM 2007), Budapest, 2007.

Co-organizer of Winter Meetings of the Econometric Society, 1993-2001.

Member of Program Committees for numerous meetings of the European Econometric Society, European Economic Association, the Society for the Advancement of the Economic Theory, Public Economic Theory.

Co-organizer of *Chaire d'assurance*, Paris (with Pierre Picard and Pierre-Yves Geoffard), 1999-2006.

Co-organizer of the "Risks and Social Protection" Seminar at Delta then PSE 1999-2006.

Organizer of séminaire Fourgeaud, Ecole des Ponts et Chaussées, Paris, 1989-1991.

Organizer of *Formation Mathématique de la Finance*, Collège Polytechnique, 1992-1995.

Computer science conferences:

Data for Policy Conference <http://dataforpolicy.org> (BIS, London), Member of Program Committees in 2016 (Cambridge) , 2017 (London), Advisory committee member 2020 (London),

Electronic Commerce Conference 2017. Member of Program Committee

5th International Conference in Algorithmic Decision Theory 2017, Member of Program Committee

Web and Internet Economics Conferences 2005 and 2007. Member of Program Committee

Editorial Activities

Advisory Editor, Journal of Mathematical Economics 2020-

Member of the Editorial Board of *Data & Policy*, 2019-

Co-editor *Economic Theory*, 1998-2004.

Associate Editor *Review of Economic Design*, 1998-.

Associate Editor *Mathematical Social Sciences*, 2000-2011.

Associate Editor *Finance*, 2000-2005.

Associate Editor *Mathématiques et Sciences Humaines*, 1990-2000.

Member of the *Economic policy* panel, 2004-2005

Associate editor of *Journal of European Economic Association*, 2004-2007.

Administrative responsibilities

Director of Doctoral Formation "Analyse et Politique Economiques", EHESS, ENSAE, Ecole Polytechnique, Ecole Normale Supérieure, 1991-1999.

Responsible for APE of the European Doctoral Programme in Quantitative Economics www.edpqe.eu, 1994-2007.

Scientific Council EHESS, 1993-1997.

Responsible at Delta of 'Markets and Organizations', 1999-2007.

Responsible for PSE of 'Markets and Organizations' team 2007--2010
Steering Committee PSE, 2007-2012.

Research grants

ANR Blanc (French Funding Agency) "Financial Infrastructure: Risks and Regulation" (Firr) (2018-2023)

Participation in the Scientific project "Value creation and taxation in the digital economy" for the French Government's Strategic Office (France Strategie) (2016-2017)

Participation in the Scientific project "Taxation in a digital economy" for the French Government's Prospective Office (Commissariat Général de la Stratégie et de la Prospective) (2014-2015)

ANR Blanc NET (2011-2014) Information et communication dans les réseaux grande échelle.

PEPS (Projets Exploratoires / Premier Soutien avec l'université de Bourgogne (laboratoire Le2) Stratégies émergentes pour la publication de contenu sur le Web. 2010

Bavarian-French Centre of Cooperation (BFHZ-CCUFB) 2008-2009

Studies for the Commissariat au plan, CCF, EDF, CAR (CDC).

Areas of Research Interest

Game theory, Networks theory

Financial economics: Risk sharing, functioning of financial markets (information, imperfect competition) Financial infrastructures

Public economy: Taxation, Social Security, Intergenerational risk sharing.

Main Courses Taught

Microeconomics (introduction, advanced), General equilibrium, Financial Economics (introduction, advanced), Game Theory (introduction, advanced), Topics in Network economics.

Working papers

Orderly resolutions in a system of financially linked firms. June 27, 2022. Available at SSRN: <https://ssrn.com/abstract=4147821>

Papers

Régulation des marchés de produits dérivés : Bilan et perspectives, Opinions et débats, ILB, avec Thibaut Piquard et Guillaume Vuillemeys, Janvier 2023. French and english versions.

On the resolution of cross-liabilities, *Mathematical Programming*, Online 8 February 2023, SSRN 4285669,

Simple visibility design in network games, forthcoming in the volume "*David Gale, Mathematical Economist: Essays in Appreciation on his 100th Birthday*" edited by Ali Khan, Nobusumi Sagara and Alexander Zaslavski.

On the choice of central counterparties in the EU, with Piquard, T. (2023) *Journal of financial markets*. Downable until 25 April at <https://authors.elsevier.com/c/1giGW4xF2Vkqbk> Available at SSRN 3875468.

"Asset Dissemination through Dealer Markets", with Jean-Edouard Colliard, *Management Science*, 2021, 6211-6234, <https://doi.org/10.1287/mnsc.2020.3779>

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"Profit-splitting rules and the taxation of multinational digital platforms", with Francis Bloch, *International Tax and Public Finance*, 2021 1-35. [Vox column](#)

"Communicating on electoral platforms", with Karine Van der Straeten, online 2017 *Journal of Economic Behavior & Organization* [Volume 174](#), June 2020, Pages 402-419.

"Competition in the quality of higher education: The impact of student mobility", with Robert Fenge and Silke Uebelmesser, *International Tax and Public Finance* 27(5), 2020, 1224-1263.

“New electoral systems and old referendums”, in 'The Future of Economic Design', edited by J-F Laslier, H. Moulin, R. Sanver, and W. S. Zwicker, Springer, 2019, pp. 67-73.

“Mechanisms in a digitalized world” in 'Social Design: Essays in Memory of Leonid Hurwicz' edited by Walter Trockel, Springer, 2019, pp 307-322.

“Rumors and Social Networks”, with Francis Bloch and Rachel Kranton, *International Economic Review* Vol. 59, Issue2 May 2018 Pages 421-448.

“Contagion in financial networks: a threat index”, *Management Science*, Vol. 64, No. 2, February 2018, pp. 955–970. <http://dx.doi.org/10.1287/mnsc.2016.2592>

“Taxation and Privacy Protection on Internet Platforms,” with Francis Bloch *Journal of Public Economic Theory* (2018) 20(1), 52-66.

“Mutual rankings”, *Mathematical Social Sciences* 2017, 90, 35-42. <http://dx.doi.org/10.1016/j.mathsocsci.2016.09.006>

“Optimal targeting strategies in a network under complementarities”, *Games and Economic Behavior*. 2017. [Volume 105](https://doi.org/10.1016/j.geb.2017.07.004), 84-103, .<https://doi.org/10.1016/j.geb.2017.07.004> o

“The stability of group formation”, *Revue d'Economie Politique* 2017 n° 4, 495-516.

“Joint Design of Emission Tax and Trading Systems”, with Bernard Caillaud, *Annals of Economics and Statistics*. 2017 issue 127, pages 163-201.

“Quality of Education and the Number of Students: A General-Equilibrium Analysis" with Robert Fenge and Silke Uebelmesser *Journal of Institutional and Theoretical Economics*. (2015),171(3), 456-477.

“A ranking method based on handicaps” *Theoretical Economics*, 9 (2014), 915–942.

"Financing Higher Education in a Mobile World", *Journal of Public Economic Theory*, with Robert Fenge and Silke Uebelmesser, 2014, *16*(3), 343-371.

“Collective attention and ranking methods” *Journal of Dynamics and Games*, American Institute of Mathematical Sciences, USA, Volume 1, Number 1, January 2014, 17-43, DOI: [10.3934/jdg.2014.1.17](https://doi.org/10.3934/jdg.2014.1.17) .

"On allocating seats to parties and districts: apportionments", *International Game Theory Review* , Vol. 15, No. 3 (2013) DOI: 10.1142/S0219198913400148.

"On the influence of a ranking system", *Social Choice and Welfare*, Vol 39, Issue 2 (2012), Page 431-455, DOI 10.1007/s00355-011-0631-5.

"On party-proportional representation under district distortions", *Mathematical Social Sciences* 2012, 63, 181-191, DOI:10.1016/j.mathsocsci.2011.10.002.

"Majority relation and median representative ordering", *SERIEs*: 2012, 3, Issue 1, 95-109, DOI 10.1007/s13209-011-0052.

"Universally Balanced Combinatorial Optimization Games", with Xiaotie Deng, *Games*, 2010, 1, 299-316.

"Sharing information in web communities" *Games and Economic Behavior*, March 2010, Volume 68, Issue 2, 580-601.

"On sustainable Pay-As-you-Go contribution rules", *Journal of Public Economic Theory* 2009, 11 (4), 493-527.

"The strategy structure of some coalition formation games", *Games and Economic Behavior*. January 2009, 65, issue 1, 83-104.

"The Provision of Higher Education in a Global World-Analysis and Policy Implications", with Robert Fenge and Silke Uebelmesser, *CESifo Economic Studies*, 2008 doi10.1093/cesifo/ifn010.

"Information Sharing Communities" *Springer's LNCS, Lecture Notes in Computer Science*, 2007 pp 96-107.

"Reforming incentive schemes under political constraints: The physician agency", with Pierre-Yves Geoffard, *Annales d'économie et de statistique*, 2006 83/84, 227-250.

"Incentives in some coalition formation games" *Springer's LNCS, Lecture Notes in Computer Science*, December 2005, 258-268.

"On group stability in hierarchies and networks", *Journal of Political Economy*, August 2004, 112, 754-778.

"Ouverture des systèmes de retraite par répartition: l'impact du libre choix", *Revue Economique*, 55, May 2004, 479-488.

"Impact de la liquidation d'une option sur un marché d'action" with Cécile Boyer, *Annales d'économie et de statistique*, 73, Janvier-Mars 2004, 119-140.

"On optimality in intergenerational risk sharing", *Economic Theory*, 20, 2002, 1-27.

"On coalitional stability of anonymous interim mechanisms", with Roger Guesnerie, *Economic Theory*, 18 (2), 2001, 367-389.

"Social Security with heterogeneous populations subject to demographic shocks", with Guy Laroque, *Geneva papers on Risk and Insurance Theory*, 26, 2001, 5-24.

"Retraite par répartition ou par capitalisation : une analyse de long terme", with Guy Laroque, *Revue Economique*, 2000, 813-829.

"Social Security, Optimality and Equilibria in a Stochastic Overlapping Generations Economy", with Guy Laroque, *Journal of Public Economic Theory*, 2 (1), 2000, 1-23.

"Social Security and Demographic Shocks", with Guy Laroque, *Econometrica*, 67, 1999, 527-542.

"Efficiency and Options on the Market Index", with Guy Laroque, *Economic Theory*, 14, 1999, 227-236.

"Long-Sighted Principal and Myopic Agents", with Guy Laroque, *Journal of Mathematical Economics*, 30, 1998, 119-146.

"Non-emptiness of the Core: Low Dimensional Decisions Spaces and One-Dimensional Preferences", with Roger Guesnerie, *Research in Economics*, 51, 1997, 7-17.

"Private Information and the Design of Securities", with Guy Laroque, *Journal of Economic Theory*, 65, 1995, 233-257.

"Optimality of Incomplete Markets", with Guy Laroque, *Journal of Economic Theory*, 65, 1995, 218-232.

"Information asymétrique et émissions d'actifs", with Guy Laroque, *Revue Economique*, 1994, 639-656.

"Intermediate Preferences and Stable Coalition Structures", *Journal of Mathematical Economics*, 1994, 45-58.

"Rational Escalation", *Annales de l'INSEE*, 1992, 227-249.

"Sustainable Oligopolies", with Dominique Henriët, *Journal of Economic Theory*, 54, 1991, 417-428.

"Fair Allocation of Indivisible Goods and Money and Criteria of Justice", with A. Alkan and D. Gale, *Econometrica*, 59, 1991, 1023-1040.

"An Axiomatic Approach to Proportionality between Matrices", with Michel L. Balinski, *Mathematics of Operations Research*, 1989, 700-719.

"Algorithm for Proportional Matrices in Reals and Integers", with Michel L. Balinski, *Mathematical Programming*, 1989, 193-210.

"Nonmanipulable Cores", *Econometrica*, 55 (5), 1987, 1057-1074.

"A Further Note on the Stable Matching Problem", with D. Gale and M. Sotomayor, *Discrete Applied Mathematics*, 16, 1987, 217-222.

"Barrière de mobilité et concurrence dans un duopole", with Jean-Pierre Ponsard, *Annales de l'INSEE*, 1, 1986, 35-53.

"Multi-Item Auctions", with David Gale and Marilda Sotomayor, *Journal of Political Economy*, 94 (4), 1986, 863-872.

"Free-Entry and Stability in a Cournot Model", *Journal of Economic Theory*, 40 (2), 1986, 283-303.

"Asymmetries in Cost Structure and Incentives toward Prices Competition", with Jean-Pierre Ponssard, *International Journal of Industrial Organization*, 3, 1985, 85-100.

"The Strategy Structure of Two Sided Matching Markets", with D. Gale, *Econometrica*, 53 (4), 1985, 873-888.

"Implementing Efficient and Egalitarian Equivalent Allocations", *Econometrica*, 52 (5), Sept.1984, 1167-1177.

"Single Peaked Orders on a Tree", *Mathematical Social Sciences*, 3 (3), 1983, 389-396.

"A Limit Theorem on the Minmax Set", *Journal of Mathematical Economics*, 9, 1982,145-164.

Books

Finance and the Economic of Uncertainty, Gabrielle Demange and Guy Laroque, Blackwell, 2006, 281 p.

Group Formation in Economics: Networks, Clubs and Coalitions, Editors Gabrielle Demange and Myrna Wooders, Cambridge University Press, 2005, 480 p.

Finance et Economie de l'incertain, Gabrielle Demange and Guy Laroque, Economica, 2001, 267 p.

Théorie des Jeux et Analyse Economique, Gabrielle Demange and Jean-Pierre Ponssard, Presses Universitaires de France, 1994, 233 p.

Méthodes Mathématiques de la Finance, Gabrielle Demange and Jean-Charles Rochet, Economica, 1992, third édition, 2005, collection « Economie et Statistiques avancées », 303 p.

Chapters in books

Diffusion of Defaults Among Financial Institutions, Chapter 1 F. Abergel et al. (eds.), *Econophysics of Systemic Risk and Network Dynamics*, New Economic Windows, DOI 10.1007/978-88-470-2553-0_1, © Springer-Verlag Italia 2013.

L'ingénierie financière : quelles dérives ? Chapitre 2 dans « 16 Nouvelles questions d'économie contemporaine » ouvrage collectif dirigé par Daniel Cohen et Philippe Askenazy Albin Michel, 2010, 117-138.

“Free Choice of Unfunded Systems: A Preliminary Analysis of a European Union challenge”, *Pension Strategies in Europe and the United States* editors Robert Fenge, Georges de Menil and Pierre Pestieau MIT Press 2008, 206-242.

"Group formation: The interaction of increasing returns and preferences' diversity", in *Group Formation in Economics: Networks, Clubs and Coalitions*, eds Demange G. and M. Wooders, Cambridge University Press, 2005.

"Voluntary pay-as-you-go social security and intergenerational risk sharing", with Guy Laroque, in *Institutional and Financial Incentives in Social Insurance*, eds C. D'asprenmont, V. Gingsburgh, H. Sneessens, F. Spinnewyn, Kluwer Academic Publishers 2002, 175-189.

"Investment, Security Design and Information" with Guy Laroque, in *Banking, Capital Markets and Corporate Governance*, eds H. Osano and T. Tachibanaki, 2002 Palgrave.

"A Duopoly Model Suggesting a Taxonomy of Competitive Situations", with Jean-Pierre Ponssard, in *Microeconomic Contributions to Strategic Management*, eds Thepot and Thietart, 1991, Elsevier Science Publishers, 8-22.

"Le redressement des Tables de Contingence : Deux nouvelles approches", with Y.A It- Sahalia and M.L Balinski, in *Recherches Economiques : études en hommage à Edmond Malinvaud*, Economica and EHESS, 1988. English version “The adjustment of contingency tables: Two new approaches”, in: *Essays in Honor of Edmond Malinvaud, Volume 3: Empirical Economics*, Cambridge MA, 99-114.

"Notes on defining proportionality between matrices" with M. Balinski in: *Proceedings of the Eighth Mathematical Programming Symposium*, Japan, Chugoku Electric Power Co., Hiroshima, [1987], pp. 1-17.

"Spatial Models of Collective Choice", in *Locational Analysis of Public Facilities*, J. F. Thisse and H-G Holler eds, North Holland, 1983, 153-182.

Other Publications

G20 : « L'accord de Venise sur la taxation des multinationales reste à négocier » Tribune du Monde, 27 Juillet 2021, avec F. Bloch

“Conférences internationales sur le climat: reculades ou avancées ? “ commentaire dans l’ouvrage collectif “5 crises, 11 nouvelles questions d’économie contemporaine, Economiques, 3, dirigé par Daniel Cohen et Philippe Askenazy, à paraître chez Albin Michel, 2013.

Competition between unfunded systems: A European Union challenge, October 2008, *Pensions : an International Journal* 13: 213-220.

"À quoi peut servir la concurrence en assurance santé ?" with Pierre-Yves Geoffard, *Revue d'économie politique*, 114, Septembre-Octobre 2004, 595-611.

"Quelles formes de concurrence en assurance santé ?", with Pierre-Yves Geoffard, *Risques*, 49, 2002, 47-53.

"La réforme de l'Union Européenne à partir de la théorie des jeux : Commentaires", *Revue française d'économie*, October 2001, 63-73.