

# Curriculum Vitae

**Sanjeev Goyal**

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## **EDUCATION**

Hindu College, Delhi University, Delhi. India

B.A. in Economics (Honours) 1980-1983.

Indian Institute of Management, Ahmedabad. India.

M.B.A 1983-1985.

Cornell University, Ithaca. USA.

M.A. in Economics 1989.

Ph.D. in Economics 1986-1990. Supervisor: David Easley.

Committee: Larry Blume, Tapan Mitra and Karl Shell.

## **APPOINTMENTS**

Assistant Professor, Erasmus University. Netherlands. 1990-1997.

Professor of Mathematical Economics, Erasmus University. Netherlands. 1998 -2001.

Professor of Economics, Queen Mary, University of London. UK. 2001-2003.

Professor of Economics, University of Essex. UK. 2003-2006.

Reader in Economics, University of Cambridge, UK. 2006-2007.

Professor of Economics, University of Cambridge, UK. 2007-

Professorial Fellow, Christ's College, Cambridge. UK. 2008-

Wesley Clair Mitchell Visiting Professor, Columbia University, USA. Spring 2020.

Visiting Professor, NYUAD, Abu Dhabi. 2021-2022.

## **VISITING POSITIONS/AFFILIATIONS**

Visiting Professor: University of Cambridge 1996. Boston University 1996. Cowles Foundation, Yale University, 1998. GREQAM, Marseille 2004-2005; University Paris 2, 2008-2014. Microsoft Research, Cambridge, UK. 2010-2012. MIT, 2012. University of Bordeaux 2012, 2014. STICERD, London School of Economics, 2018. NYUAD, Fall 2019.

## **ADMINISTRATIVE POSITIONS**

Member of Advisory Board, Tinbergen Institute, Rotterdam-Amsterdam 2000-2003.

Director, Recruitment & Research Strategy, Faculty of Economics, Cambridge, 2009-2012.

Founding Director, Cambridge-INET Institute, 2012-2014.

Chair, Faculty of Economics, Cambridge, 2014-2018.

## HONORS AND PRIZES

National Talent Scholarship, Government of India. 1978-1985.  
Merit Scholarship, Government of Assam, India. 1978-1980.  
Gold Medal for First Position in B.A (Honours), Delhi University, India. 1980-1983.  
Industrial Scholarship, Indian Institute of Management, Ahmedabad. India. 1984-1985.  
Andrew D. White Fellowship, Cornell University, Ithaca. USA. 1986-1988.  
Research Fellow, Tinbergen Institute. Netherlands. 1995-.  
Senior Keynes Fellowship, University of Cambridge, 2011- 2016.  
Distinguished Visitor, Faculty of Economics, University of York, 2011.  
Fellow of the British Academy, 2015.  
The Ganshof van der Meersch Chair, Brussels, 2017-2018.  
Fellow of the Econometric Society, 2018.  
Goh Keng Swee Professor, Singapore, 2019.  
Council of Game Theory Society, 2019.

## PUBLICATIONS

### A. Book

1. **Connections: An Introduction to the Economics of Networks.** Princeton University Press. October 2007.  
Paperback edition published in 2009.  
Chinese translation published by Peking University Press in 2010.
2. **Principles of Networks** MIT Press. Under Contract. Expected Publication Date: 2022.

### B. Articles

#### B.1 Refereed Papers

1. The Birth of a New Market (1994), *Economic Journal*, 1994, 104, 282-290. (with V. Bala)
2. On the Possibility of Efficient Bilateral Trade (1994), *Economic Design*, 1, 79-102.
3. A Theory of Learning with Heterogeneous Agents (1995), *International Economic Review*, 36, 2, 303-323. (with V. Bala)
4. Dynamic Coordination Failures and The Efficiency of the Firm (1995), *Journal of Economic Behavior and Organization*, 1995, 28, 2, 223-241. (with M. Janssen)
5. Technological Change in Markets with Network Externalities (1995), *International Journal of Industrial Organization*, 13, 3, 307-325. (with P. de Bijl)
6. Can We Rationally Learn to Coordinate? (1996), *Theory and Decision*, 40, 1, 29-49. (with M. Janssen)
7. Interaction Structure and Social Change (1996), *Journal of Institutional and Theoretical Economics*, 152, 3, 472-495.

8. Costs of Flexibility and Equilibrium Selection (1997), *Journal of Mathematical Economics*, 1997, 28, 249-264. (with B. Galesloot)
9. Non-Exclusive Conventions and Social Coordination (1997), *Journal of Economic Theory*, 77, 34-57. (with M. Janssen)
10. Learning From Neighbours (1998), *Review of Economic Studies*, 1998, 65, 3, 595-621. (with V. Bala)  
Reprinted in
  - *Economic Analyses of Social Networks (The International Library of Critical Writings in Economics series)* (2013), edited by Matthew O. Jackson and Yves Zenou.
11. A Non-Cooperative Model of Network Formation (2000), *Econometrica*, 68, 5, 1181-1231. (with V. Bala)  
Reprinted in
  - *Networks and Groups: Models of Strategic Formation* (2003), edited by Bhaskar Dutta and Matthew O. Jackson.
  - *Economic Analyses of Social Networks (The International Library of Critical Writings in Economics series)* (2013), edited by Matthew O. Jackson and Yves Zenou.
12. A Strategic Analysis of Network Reliability (2000), *Review of Economic Design*, 2000, 5, 3, 205-229. (with V. Bala)  
Reprinted in *Networks and Groups: Models of Strategic Formation* (2003), edited by Bhaskar Dutta and Matthew O. Jackson.
13. Conformism and Diversity under Social Learning (2001), *Economic Theory*, 17, 1, 101-121. (with V. Bala)
14. Group Size and Collective Action: Third Party Monitoring in Common Pool Resources (2001), *Comparative Political Studies*, 34, 1, 63-94. (with A. Agarwal)
15. R&D Networks (2001), *Rand Journal of Economics*, 32, 4, 686-707. (with J.L. Moraga)  
Reprinted in
  - *Economic Analyses of Social Networks (The International Library of Critical Writings in Economics series)* (2013), edited by Matthew O. Jackson and Yves Zenou.
16. Market Integration and Technological Change (2002), *Netnomics*, 4, 19-37. (with P. De Bijl)
17. Networks of Collaboration in Oligopoly (2003), *Games and Economic Behavior*, 43, 57-85. (with S. Joshi)  
Reprinted in
  - *Economic Analyses of Social Networks (The International Library of Critical Writings in Economics series)* (2013), edited by Matthew O. Jackson and Yves Zenou.

18. The Political Economy of Regionalism (2004), *European Economic Review*, 48, 563-593. (with K. Staal)
19. Network formation and social coordination (2005), *Games and Economic Behavior*, 50, 178-207. (with F. Vega-Redondo)
20. Social interaction in anti-coordination games (2004), *International Journal of Game Theory*, 33, 1-20. (with Y. Bramoulle, D. Lopez, F. Vega-Redondo)
21. Network formation with heterogeneous players (2006), *Games and Economic Behavior*, 54, 353-372. (with A. Galeotti and J. Kamphorst)
22. Bilateralism and Free-Trade (2006), *International Economic Review*, 47, 3, 749-778. (with S. Joshi),
23. Economics: an emerging small world? (2006), *Journal of Political Economy*, 114, 2, 403-412. (with J.L. Moraga and M. van der Leij),
24. Unequal connections (2006), *International Journal of Game Theory*, 34, 3, 319-349. (with S. Joshi),
25. Structural Holes in Social networks (2007), *Journal of Economic Theory*, 137, 1, 460-492. (with F. Vega-Redondo)
26. Hybrid R&D (2008), *Journal of European Economic Association*, 6 (6), 1309- 1338. (with J.L.Moraga and A. Kononov)
27. Influencing and influencers: a theory of strategic diffusion (2009), *Rand Journal of Economics*, 40, 3, 509-532. (with A. Galeotti)
28. Keeping up with the Neighbors: Social Interaction in a Market Economy (2010), *Journal of European Economic Association*, 8, 1, 90-119. (with C. Ghiglino)
29. Matching and Network Effects (2010), *Journal of European Economic Association*, 8, 1, 203-231. (with M. Fafchamps and M. van der Leij),
30. Network Games (2010), *Review of Economic Studies*, 77, 1, 218-244. (with A. Galeotti, M. Jackson, F. Vega-Redondo, L. Yariv)  
Reprinted in
  - *Economic Analyses of Social Networks (The International Library of Critical Writings in Economics series)* (2013), edited by Matthew O. Jackson and Yves Zenou.
  - *Coalitions and Networks. 12 papers from 20 years of CTN workshops* (2015), edited by Carlo Carraro.
31. The Law of the Few (2010), *American Economic Review*, 100, 4, 1468-1492. (with A. Galeotti)  
Reprinted in

- *Economic Analyses of Social Networks (The International Library of Critical Writings in Economics series)* (2013), edited by by Matthew O. Jackson and Yves Zenou.
32. Strong Ties in a Small world (2011), *Review of Network Economics*. (with M. van der Leij)
  33. Competitive Contagion in Networks (2012), *Proceedings of Symposium on Theory of Computing (STOC)*. (with M. Kearns)  
Expanded version (with H. Heidari and M. Kearns), *Games and Economic Behavior*, 2019.
  34. Network multipliers: the optimality of targeting neighbours (2012), *Review of Network Economics*. (with A. Galeotti)
  35. Network defence and design (2013), *Games and Economic Behavior*, 79, 30-43. (with M. Dziubinski)
  36. Contagion and observability in security domains (2013), *Allerton Conference on Communications, Control, and Computing*, 1364-1371. (with Y Bacharach and M. Draief).
  37. Social Networks and Research Output (2014), *Review of Economics and Statistics*, 96, 5, 936-948. (with L. Ductor, M. Fafchamps and M. van der Leij)
  38. Attack, defense and contagion in networks (2014), *Review of Economic Studies*, 81, 4, 1518-1542. (with A. Vigier)
  39. Interaction, Protection and Epidemics (2015), *Journal of Public Economics*, 125, 64-69. (with A Vigier)
  40. Network Cognition (2016), *Journal of Economic Behavior and Organization*, 123, 78-96. (with R. Dessi and E. Gallo)
  41. Favoritism (2016), *Journal of Development Economics*, 122, 16-27. (with Y. Bramoulle).
  42. Strategic Network Formation with Attack and Immunization (2016), *Web and Internet Economics (WINE)*. (with S. Jabbari, M. Kearns, S. Khanna, and J. Morgenstern).
  43. Networks, Markets and Inequality (2017), *American Economic Review*, 107, 1, 1-30. (with J. Gagnon).
  44. How do you defend a network? (2017), *Theoretical Economics*, 12, 1, 331-376. (with M. Dziubinski)
  45. Trading in Networks: Theory and Experiments (2017), *Journal of European Economic Association*, 15, 4, 784-817 (with S. Choi and A. Galeotti).
  46. Information Acquisition and Exchange in Social Networks (2017), *Economic Journal*, 127, 2302-2331 (with S. Rosenkranz, U. Weitzel, and V. Buskens).

47. Individual Security, Contagion, and Network Design (2014), Extended abstract published in EC'14 Proceedings of the Seventeenth ACM Conference on Economics and Computation, (with D. Cerdeiro, M. Dziubinski)  
Expanded Version Published in *Journal of Economic Theory*, 170, 182-226, (2017).
48. Narrow Identities (2019), *Journal of Institutional and Theoretical Economics*, 175, 3, 395-419 (with Partha Dasgupta).
49. Targeting Interventions in Networks (2020), *Econometrica*, (with A. Galeotti and B. Golub), 88, 6, 2445-2471.
50. Effect of network topology and node centrality on trading (2020), *Nature: Scientific Reports*, (with F. M. Cardoso, C. Gracia-Lazaro, F. Moisan, A. Sanchez, and Y. Moreno).
51. Integration and Diversity (2021), *Experimental Economics*, (with P. Hernandez, G. Martinez, F. Moisan, M. Munoz, and A. Sanchez), 24, 387-413.
52. Dynamic Conflict on A Network. (Extended abstract published in EC'16 Proceedings of the Seventeenth ACM Conference on Economics and Computation, 2016, (with Marcin Dziubinski and David E. N. Minarsch)  
Expanded version 'The Strategy of Conquest' (2021), *Journal of Economic Theory* forthcoming.
53. Gender and Collaboration (2021), forthcoming *Review of Economics and Statistics*, (with L. Ductor and A. Prummer).

## **B.2 Other Articles, Surveys and Book Chapters**

54. Grace Periods in Patent Law (1998), in Mike Baye (eds), *Advances in Microeconomic Theory: Contests*, 1998. JAI Press. New York. (with E.E De Laat)
55. Firms, Networks and Markets: a survey of recent research (2003), *Review Economique Industrielle*, 103, 207-232. (with J.L. Moraga)
56. Learning in networks (2005), in Gabrielle Demange and Myrna Wooders (eds) *Group Formation in Economics: Networks, clubs and coalitions*. CUP.
57. Strong and weak links (2005), *Journal of European Economic Association, Conference Proceedings*, 3, 608-616.
58. Social Networks in Economics (2011), in *Handbook of Social Network Analysis*. Edited by Peter Carrington and John Scott. Sage.
59. Social Networks on the Web (2012), in *Handbook of the Digital Economy*. Edited by Martin Peitz and Joel Waldfogel. OUP.

60. Learning in Networks (2012), in *Handbook of Social Economics*. Edited by Jess Benhabib, Alberto Bisin, and Matthew Jackson. North Holland.
61. Networks in Economics: A Perspective on the Literature (2016), in *The Oxford Handbook of The Economics of Networks*. Edited by Y. Bramouille, A. Galeotti and B. Rogers. OUP.
62. Conflict and Networks (2016), in *The Oxford Handbook of The Economics of Networks*. Edited by Y. Bramouille, A. Galeotti and B. Rogers. (with M. Dziubinski and A. Vigier). OUP.
63. Networks and Markets (2017), in *Advances in Economics and Econometrics: Eleventh World Congress of the Econometric Society*, edited by B. Honore, A. Pakes, M. Piazzesi and L. Samuelson. CUP.
64. Heterogeneity and Networks (2018), in *Handbook on Heterogeneous Agent Models*, edited by C. Hommes and B. LeBaron. North Holland.
65. Book Review of Mark Granovetter's 'Society and Economy: Framework and Principles' (2019), *Journal of Economic Literature*, 57, 3, 678-89.
66. Networks and economic policy (2019), with Matthew L. Elliott and Alexander Teytelboym, in *Oxford Review Economic Policy*, 35, 4, 565-585.

## GRANTS

1. Principal investigator: *Strategic Networks of R&D Collaboration*, 2001-2005. Co-investigator: Jose Luis Moraga-Gonzales. Awarded by Dutch Science Foundation (NWO). Amount: Dutch Guilders: 409,000/-
2. Principal investigator: *Influencing the influencers: a theory of strategic diffusion*. 2006-2007. Co-investigator: Andrea Galeotti. Awarded by Economic Social Research Council, UK. Amount: GBP 64,535/- *Output Rated Outstanding*.
3. Principal Investigator for Research Seminars Grant 2011-2012. Co-investigators: Andrea Galeotti and Marcel Fafchamps. Awarded by Economic Social Research Council, UK. Amount: GBP 18,145/-
4. Principal Investigator *Resilience of Economic and ecological systems*. 2011-2012. Co-PI's: Angel Sanchez, Antonio Cabrales, A. McKane, M. Rietkerk, Miguel Zavala. Awarded by Complexity Net Call and Engineering and Physical Sciences Research Council, UK. Amount: Euros 500, 000/-
5. Exploratory Workshop *On Diffusion and Information in Networks*. 2011. Co-organizers: Marcel Fafchamps and Edoardo Gallo. European Science Foundation. Euros 14,000/-.

6. Principal Investigator, *Experiments on Financial Networks*. 2012. Keynes Fund for Applied Economics. GBP 18,500/-
7. Principal Investigator, *Experiments on Networked Markets*, 2014. Keynes Fund for Applied Economics. GBP 13,000/-
8. Co-Coordinator, *Bridging the gap: From Individual Behaviour to the Socio-Technical Man (IBSEN)*, 2015-2018. EU Horizon 2020 Grant. Partners: Carlos 3, Zaragoza, Oxford, Amsterdam, Aalto, Valencia. Euros 2.6 million/-
9. Principal Investigator, *Efficiency and Inequality in a Network Economy*, 2018-2020. Keynes Fund for Applied Economics. GBP 125,000/-
10. Principal Investigator, *Social Learning and Fake News*, 2019-2022. Keynes Fund for Applied Economics. GBP 57,000/-

### **EDITORIAL WORK**

1. Founding Editor: *Network Science*. Cambridge University Press. 2012-2014.
2. General Editor, *Elsevier Handbooks in Economics*. 2018-
3. Guest Editor, Networks and Economic Policy. *Oxford Review of Economic Policy*. 2019.

### **INVITED LECTURES**

#### **A. Keynote and Named Lectures**

- 10<sup>th</sup> Workshop on Economic Heterogeneous Interacting Agents. UK. 2005.  
 GameNets: International Conference on Game Theory for Networks. Turkey. 2009.  
 17<sup>th</sup> Workshop on Economic Heterogeneous Interacting Agents. France. 2012.  
 The Pareto Lecture, ASSET, Cyprus. 2012.  
 The Annual Lecture, European Academy of Sociology. Paris. 2013.  
 Economics and Management of Networks, Agadir, Morocco, 2013.  
 Southern California Meeting UCLA, USA, 2013.  
 Agriculture and Applied Economics Association, Montreal, Canada. 2014.  
 The Annual Guest Speaker Lecture, Queen Mary, London, 2015.  
 21<sup>st</sup> Workshop on Economic Heterogeneous Interacting Agents. Spain. 2016.  
 The Paul Keindorfer Lecture, Society of Economic Design, York. 2017.  
 The Ganshof van der Meersch Chair Lecture, Brussels, 2018.

#### **B. Invited Lectures**

- “Networks” at European Economic Association Meetings. Spain. 2004.  
 Structure and Function of Complex Networks, Trieste, Italy. 2005.  
 ADRES, Networks of Innovation and Spatial Analysis of Knowledge Diffusion. France. 2006.  
 Coalitions and Networks, CORE, Belgium. 2007.



“Empirical study of social networks”, Econometric Society Meetings, Hungary. 2007.  
 Social Networks Spark Conference. Unilever. UK. 2008.  
 CS-Economics Conference. Cornell University. USA. 2009.  
 Workshop on Information Networks. NYU. USA. 2009, 2010, 2011, 2012, 2015.  
 Social Interactions, Networks and Health II. Harvard University, USA. 2009.  
 ‘Social Networks’ at European Economic Association Meetings, Glasgow. UK. 2010.  
 Psychology and Economics of Scarce Attention, Toulouse. France. 2011.  
 Latsis Symposium, Zurich. Switzerland, 2012.  
 Belgian Networks Meetings, 2013.  
 ‘Networks and Markets’, World Congress of the Econometric Society, Montreal, 2015.  
 Networks and Stress Testing Conference, Bank of Mexico. Mexico City, 2015.  
 Plenary Lecture, Game Theory Conference, Stony Brook. New York, 2016.  
 Public Lecture, Oxford Mathematical Institute. 2017.  
 BIFI Conference: Complexity, Networks and Collective Behaviour. Zaragoza, 2018  
 IDSS Distinguished Seminar, MIT, 2018.  
 SHUFE Microeconomic Theory Conference 2018.

### **C. Research Lectures/Summer schools**

Lectures, Alicante, Spain (1999). Ph.D Lecture Course on Networks, Tinbergen Institute, Netherlands (2005). Graduate Course on ‘Economics of Networks’, Institute for Advanced Studies, Vienna, Austria (2006). Lectures to Interdisciplinary Research Group on “The Economics Approach to Study of Networks”, University of Utrecht, Netherlands (2006). Joint Research Lectures for CREED, Tinbergen Institute & ENCORE, Amsterdam, Netherlands (2003). Network Science Annual Conference UK (2008). RES Easter School, UK (2009). NAKE Lectures, Netherlands (2009). Trento Summer School, Italy (2009, 2011), Indian Institute of Science, Bangalore (2012). Cambridge Summer School in Social Economics, England (2014). Berlin Lectures, Germany (2014). Sao Paulo Lectures, Brazil (2014). HECO-Beijing Lectures, China (2015). Mumbai Lectures, IIT-IGIDR Bombay (2016). Jerusalem Summer School (2016). Delhi School of Economics Winter School (2017). Melbourne Summer School, Australia (2018).

## **DOCTORAL STUDENTS**

Current students

1. Jorg Kalbfuss
2. Tony To
3. Fulin Guo

Previous students (with first appointment):

1. Eric de Laat (Netherlands Civil Service).
2. Klaas Staal (Bonn).
3. Andrea Galeotti (Essex/Caltech).
4. Marco van der Leij (Alicante).

5. Willemien Kets (Northwestern/Santa Fe Institute).
6. Ana Babus (Chicago Fed/Cambridge).
7. J. Roberto Parra-Segura (RBB Economics, London).
8. Alessio D'Ignazio (Bank of Italy, Rome).
9. Adrien Vigier (Oxford/CORE).
10. Bryony Reich (Northwestern/UCL).
11. Oliver Baetz (McKinsey Consultants, Berlin)
12. James Rutt (UK Civil Service).
13. Diego Cerdiero (IMF).
14. Julien Gagnon (McKinsey Consultants, London).
15. David Minarsh (Own Start-up)
16. Gustavo Nicolas Paez (ODI, Myanmar)
17. Sihua Ding (Nankai University, China)
18. Alan Walsh (Bank of Canada, Ottawa).

## **POST-DOCTORAL FELLOWS**

### Current

1. George Charlson

### Previous (with follow-up appointments)

1. Alexander Konovalov (Innsbruck, Austria).
2. Marcin Dziubinski (Warsaw, Poland).
3. Anja Prummer (Queen Mary, London)
4. Vessela Daskalova (Toulouse, France)
5. Leonie Baumann (McGill, Montreal)
6. Frederic Moisan (EMLYON, France)
7. Eduard Talamas (IESE, Barcelona)

## **SEMINAR & CONFERENCE ORGANIZATION**

### **A. Large Conferences**

Scientific Council for Workshop on Economic Heterogeneous Interacting Agents. 2001.  
 Programme Committee for Econometric Society European Meetings. 2002.  
 Programme Committee for European Economic Association Meetings. 2004.  
 Programme Committee for European Economic Association Meetings. 2005.  
 Programme Committee for World Congress, Econometric Society. Montreal 2015.  
 Programme Committee for Fifth Congress, Game Theory Society. Maastricht 2016.  
 Chair, Programme Committee, European Winter Meetings, Econometric Society 2020.  
 Chair, Programme Committee, Royal Economic Society Annual Conference 2022.

### **B. Specialized Conferences/Seminar Series**

Individual Rationality and Social Norms, Tinbergen Institute. Netherlands. 1993.  
 Economics of Networks, Tinbergen Institute. Netherlands. 1999.  
 Economic Theory Seminar Series, The Tinbergen Institute. Netherlands. 1993-2000.

Econometric Institute Seminar Series, Netherlands. 1995-2000.  
Research on Monday Seminar Series, Erasmus University, Netherlands. 1995-2001.  
Frictionless Economy?, Tinbergen Institute. Netherlands. 2001.  
Inaugural Lipsey Lectures, University of Essex. UK. 2004.  
Diffusion in Networks, University of Essex. UK. 2007.  
Networks and Games, University of Tilburg, Netherlands. 2008.  
The empirical analysis of networks, University of Alicante, Spain. 2008.  
Microeconomics Seminars, Faculty of Economics, University of Cambridge. UK. 2008-2010.  
Reading Group: Networks and Theory, University of Cambridge, UK. 2007-2013  
Information and Behavior in Networks. Nuffield College, University of Oxford. UK. 2010.  
Microsoft-CREMIC Joint Conferences, Cambridge, UK. 2009-2012.  
ESRC Seminars on Networks, Cambridge-Essex-Oxford, UK. 2011-2012.  
Summer School in Social Economics, Cambridge, UK. 2014.  
European Networks Forum. 2015-