

Economics of Networks

2014 Berlin Lectures

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Workers find jobs via personal acquaintances, firms collaborate to introduce new technologies, doctors prescribe new drugs based on conversations with colleagues, farmers learn about crops from neighboring farms, while pupils strive to conform to the work ethic of their peers at school. Our opportunities and our choices are shaped by the connections we have. The awareness that connections matter leads us to invest in them. And these investments give rise to networks of friendship, the world wide web, the network of collaboration among firms, and many other networks which we see around us. These observations have inspired an exciting new research programme in economics which examines the origins and the implications of networks. The lectures in this course provide a rigorous introduction to this research.

Topics

- 1: Introduction
- 2: Network formation: Strategic and Random Graph Models
- 3: Games on networks
- 4: Networks and markets
- 5: Conflict, contagion and network resilience

Textbook

Sanjeev Goyal (2007), *Connections*. Princeton University Press.

Recommended Books

- A-Laslo Barabasi (2001), *Linked*.
Bisin, A., J. Benhabib and M. Jackson (2011), *Handbook of Social Economics*. North Holland.
Matthew O. Jackson (2008) *Social and economic networks*.
James Rauch and Alessandra Casella (2001), *Networks and Markets*.
Fernando Vega-Redondo (2007), *Complex Social Networks*.
Duncan Watts (1999), *Small Worlds*.
David Easley and Jon Kleinberg (2010), *Networks, Crowds and Markets*.

Articles

1. Bala, V. and S. Goyal (2000), A Non-Cooperative Model of Network Formation, *Econometrica*.
2. Bala, V. and S. Goyal (1998), Learning from Neighbours, *Review of Economic Studies* 65, 595-621.
3. Ballester, C., A. Calvo-Armengol, and Y. Zenou (2006), Who's who in networks. Wanted: The Key Player, *Econometrica*.
4. Bramoullé, Y. and R. Kranton (2007), Local public goods in Networks, *Journal of Economic Theory*.
5. Bramoullé, Y., R. Kranton, and M. Amours (2014), Strategic interaction in networks. *American Economic Review*.
6. Calvo-Armengol, A. and M. O. Jackson (2004) "The Effects of Social Networks on Employment and Inequality, *American Economic Review*.
7. Choi, S., A. Galeotti and S. Goyal (2014), Trading in networks: theory and experiments, Cambridge-INET Working Paper 2014-8.
8. Corominas Bosch, M. (2004), Bargaining in a two-sided network model, *JET*.
9. Currarini, S., M. O. Jackson, P. Pin (2009), An Economic Model of Friendship: Homophily, Minorities and Segregation, *Econometrica*.
10. Farboodi, M. (2014), Intermediation and Voluntary Exposure to Counterparty Risk. *Working Paper, University of Chicago*.
11. Galeotti, A (2010), Talking, searching and pricing. *International Economic Review*.
12. Galeotti, A., S. Goyal, M. Jackson, F. Vega-Redondo and L. Yariv (2010), Network Games, *Review of Economic Studies*.
13. Galeotti, A. and S. Goyal (2010), The Law of the Few, *American Economic Review*.
14. Ghiglino, C. and S. Goyal (2010), Keeping up with Neighbors, *Journal of European Economic Association*.
15. Goyal, S. and J. L. Moraga-Gonzalez (2001), R&D Networks, *Rand Journal of Economics*.

16. Goyal, S. and S. Joshi (2003), Networks of collaboration in oligopoly, *Games and Economic Behavior*.
17. Goyal, S. and S. Joshi (2006) Bilateralism and Free Trade, *International Economic Review*.
18. Goyal, S. and F. Vega-Redondo (2007), Structural holes in social networks, *Journal of Economic Theory*.
19. Goyal, S. and A. Vigier (2014), Attack, defence and contagion in networks, *Review of Economic Studies*. Forthcoming.
20. Granovetter, M. (1973), The Strength of Weak Ties, *American Journal of Sociology*.
21. Granovetter, M. (1985), Economic Action and Social Structure: The Problem of Embeddedness, *American Journal of Sociology*.
22. Hagedoorn, J. (2002), Inter-firm R&D partnerships: an overview of major trends and patterns since 1960, *Research Policy*.
23. Hojman, D., and A. Szeidl (2008), Core and periphery in endogenous networks, *mimeo. Journal of Economic Theory*.
24. Jackson, M. and A. Wolinsky (1996), A Strategic Model of Economic and Social Networks, *Journal of Economic Theory*.
25. Karlan, D., M. Mobius, T. Rosenblat and A. Szeidl (2009), Trust and Social Collateral, *Quarterly Journal of Economics*.
26. Kirman, Alan (1997), The Economy as an Evolving Network, *Journal of Evolutionary Economics*.
27. Kranton, R. and D. Minehart (2001), A theory of buyer-seller networks, *American Economic Review*.
28. Manea, M (2011), Bargaining in Stationary Networks, *American Economic Review*.
29. Montgomery, J. (1991), Social networks and labor-market outcomes: toward an economic analysis, *American Economic Review*.
30. Powell, W (1990), Neither market nor hierarchy: network forms of organization, *Research in Organizational Behavior*.
31. Westbrock, B. (2010), Natural concentration in industrial research collaboration, *Rand Journal*