

THEORY AT NORTHWESTERN UNIVERSITY

Northwestern has a history as a breeding ground for many of the important advances in modern microeconomic theory. That tradition continues today. Indeed, for Ph.D. applicants interested in economic theory, [Northwestern University](#) provides a uniquely stimulating learning and research environment, with features unmatched elsewhere. A key element is the seamless integration of the [Department of Economics](#) and the [Kellogg School of Management](#), which gives Northwestern's theory community more theory faculty, more theory courses, more theory visitors, and more theory seminars than anywhere else in the world.

Theory in the Department of Economics and the Kellogg School of Management

The Department of Economics and the Kellogg School of Management are home to a remarkably large number of theory faculty. The Economics Department alone currently has eleven faculty who specialize in theory; together with the [MEDS](#) (Managerial Economics and Decision Sciences), [Strategy](#), and [Finance](#) Departments in Kellogg the sum is over 40 faculty devoted to theory.

Magnifying the effect of these large numbers, the Department of Economics and the Kellogg School of Management are in the same building. As a result, *the theory community at Northwestern is truly one community in a manner that is true nowhere else*. Theory students in the Economics Department and Kellogg School regularly take courses together. The Department of Economics and Kellogg run the weekly theory seminars jointly, and jointly fund visitors and conferences. Cross-advising is the norm. Indeed, insofar as research and teaching is concerned there is a seamless connection between the Economics Department and the Kellogg School.

This unique community is also complemented by other strengths at Northwestern. Northwestern is very strong in other related fields, including econometrics, industrial organization, macroeconomics, and political economy. Another resource for theory students at Northwestern is offered by the faculty in the [Department of Electrical Engineering and Computer Science \(EECS\)](#), who participate in many of our theory activities and run additional conferences and seminars.

The theory faculty at Northwestern include four members of the American Academy of Arts and Sciences and at least eight fellows of the Econometric Society. Northwestern theory faculty are members of the editorial boards of many journals, including all the leading theory journals, several of the leading general interest journals, and many other (e.g., applied theory) journals. Specifically, there is a coeditor of *The American Economic Review*, two foreign editors of the *Review of Economic Studies*, two associate editors of *Econometrica*, two editors and two associate editors of the *Journal of Economic Theory*, one editor of *Games and Economic Behavior*, and two associate editors of the *Rand Journal of Economics*. There is also a previous editor of *Econometrica* and a former coeditor of the *Rand Journal of Economics*.

Faculty research interests are correspondingly broad, covering a wide range of topics, including decision theory, foundations of game theory, mechanism design, repeated games, reputation, evolution, contract theory, behavioral economics, continuous time modeling, communication, bounded rationality, and more. Currently, the Economics Department and Kellogg School theory faculty includes the following individuals, whose research interests are also indicated:¹²

Economics Department:

1. [Eddie Dekel](#) (Decision theory, Game theory esp. foundations of game theory, Voting)
2. [Piotr Dworczak](#) (Mechanism and Information Design, Financial Market Design)
3. [Jeff Ely](#) (Game theory, Mechanism design, Evolution, Behavioral economics)
4. [Yingni Guo](#) (Microeconomic Theory; Dynamic delegation, Communication and voting, Repeated games)
5. [Wojciech Olszewski](#) (Information and communication in economics, Repeated games, Decision theory, Mechanism design, Reputation)
6. [Harry Pei](#) (Game theory, Political economy, Organizational economics)
7. [Alessandro Pavan](#) (Mechanism design esp. dynamic, Global games, Coordination, Information economics)
8. [Bill Rogerson](#) (IO Theory, Mechanism design esp. Principal-agent, Procurement)
9. [Marciano Siniscalchi](#) (Foundations of game theory, Decision theory)
10. [Bruno Strulovici](#) (Microeconomic theory with applications to political and financial economics)
11. [Asher Wolinsky](#) (Game theory, IO theory, Information economics.)

MEDS (Managerial Economics and Decision Sciences):

1. [Nabil Al-Najjar](#) (Decision theory, Learning, Reputation)
2. [Nemanja Antic](#) (Contract Theory, Political economy)
3. [David Austen-Smith](#) (Political economy, Social choice, Cheap talk and signaling)
4. [Sandeep Baliga](#) (Mechanism design, Contract theory, International relations)
5. [Isaias N. Chaves](#) (Information economics, market design, and political economy)
6. [Georgy Egorov](#) (Political economy, Organizational economics)
7. [Tim Feddersen](#) (Political economy, Voting, Behavioral economics)
8. [Ronen Gradwohl](#) (Game Theory, Mechanism Design, Computer Science)
9. [Ehud Kalai](#) (Emeritus) (Game theory, Learning)
10. [Peter Klibanoff](#) (Decision theory, game theory, mechanism design, asset pricing)
11. [Daniel Martin](#) (Attention and Perception, Information Disclosure, Behavioral Welfare Economics)
12. [Joshua Mollner](#) (Game Theory, Information economics)

¹ [EECS faculty](#) include [Jason Hartline](#) and [Ming-Yang Kao](#) who focus on issues that include algorithmic game theory, algorithmic mechanism design, social networks.

² Kellogg also has the Department of [Operations](#) ([Bandi](#), [Bassamboo](#), [Bray](#), [Chopra](#), [Deshmukh](#), [Islegen](#), [Van-Mieghem](#)). Some of their research combines queuing theory and stochastic processes with economic theory to examine the behavior of manufacturing and service systems.

13. [Ameet Morjaria](#) (Economic Development, Organizational Economics, Political Economy)
14. [Nicola Persico](#) (Contract theory, Game theory, Political economy, Voting systems)
15. [Yuval Salant](#) (Behavioral economics, Bounded rationality, and Decision theory)
16. [Alvaro Sandroni](#) (Behavioral Economics, Economic Theory)
17. [James Schummer](#) (Game Theory, Mechanism Design)
18. [Eran Shmaya](#) (Game theory, Probability and Information theory)
19. [Jorg Spenkuch](#) (Political Economy and Applied Microeconomics)
20. [Alireza Tahbaz-Salehi](#) (Information economics, Networks)
21. [Edoardo Teso](#) (Political economy, development economics, and applied microeconomics)
22. [Robert Weber](#) (Emeritus) (Auction theory, Bayesian games)

Strategy:

1. [Daniel Barron](#) (Contract Theory, Economics of Organizations, Information Economics)
2. [David Besanko](#) (Industrial Economics, Public Policy, Regulation)
3. [Meghan Busse](#) (Pricing, price discrimination, market structure and competition)
4. [George Georgiadis](#) (Contract Theory, Economics of Organizations, Information Economics)
5. [Niko Matoushek](#) (Contract theory, Economics of organizations, Information economics)
7. [Michael Powell](#) (Organizational economics, Relational contracts, Theory of the firm)
8. [Luis Rayo](#) (Organizational economics, social economics)
9. [Bryony Reich](#) (Applied theory, network theory and political economy.)
10. [Mark Satterthwaite](#) (Healthcare Management, Strategy, Voting Systems)
11. [Daniel Spulber](#) (Innovation, Industrial Organization, Management Strategy, Law)
12. [Jeroen Swinkels](#) (Contract Theory, Economics of Organizations, Game Theory, Information Economics)

Finance:³

1. [Ian Dew-Becker](#) (Theoretical and empirical consumption-based asset pricing)
2. [Mike Fishman](#) (Corporate finance, Information economics)
3. [Kathleen Hagerty](#) (Market microstructure)
4. [Konstantin W. Milbradt](#) (Financial Economics, Liquidity, Asset Pricing & Corporate Finance under Financial Frictions)
5. [Charles Nathanson](#) (Asset Pricing, Behavioral Finance, Public Finance, and Real Estate)
6. [Dimitris Papanikolaou](#) (Asset Pricing)
7. [Artur Raviv](#) (Corporate finance, Information economics)
8. [Costis Skiadas](#) (Asset pricing)

³ This list focuses on micro-finance; there is an excellent set of macro-finance faculty as well.

The Learning Environment

The size and strength of the Northwestern theory community has many advantages for students. Thanks to the large and diverse set of theory faculty, we are able to offer an exceptionally broad range of advanced PhD courses. This breadth of course topics provides an important building block to help students identify active areas of research that interest them and possible thesis topics.

A student can typically take more than three year-long sequences of theory courses while at Northwestern, a scope and depth of learning unmatched by any other Ph.D. program. This depth and breadth of exposure increases the likelihood students find thesis topics that truly excite them. And, with this breadth of training, Northwestern theory students are uniquely well-prepared for the years that follow, when they are themselves faculty.

In recent years the Economics Department has offered 6-8 advanced quarter courses in theory. For example, in [2018-2019](#) it is offering the following courses:

Economic Theory and Methods (Siniscalchi),
Advanced Microeconomics II (Financial Market Design) (Dworczak),
Advanced Microeconomics III (Strulovici),
Economics of Information I (Wolinsky),
Economics of Information II (Mechanism Design) (Guo),
Economics of Information III (Information, Coordination, and Market Design) (Pavan)
Furthermore, other courses in the last 3 years include:
Mechanism Design-3 & Information Design (Ely),
Optimal control for economics (Strulovici)

For the period [2018-2019](#) the MEDS and M&S departments offered the following advanced courses:

Economic Theory I: Decision Theory (Al-Najjar)
Economic Theory II: Advanced Topics in Game Theory (Schummer)
Economic Theory III: Doing Research in Economic Theory (Sandroni)
Political Economy I: Budget Deficits A Political Economy View (Persico)
Political Economy II: Conflict and Cooperation (Baliga)
Political Economy III: Social Choice and Voting Models (Egorov)
Economics of Organizations I: Organizations and Markets (Powell)
Economics of Organizations II: Organizational Dynamics (Barron)

In addition, there are courses in algorithmic game theory and mechanism design offered by the [EECS group](#), and courses of interest are also offered by the [Finance Department](#).

The large number of theory faculty and the diversity of their interests is also a big advantage for theory students at the dissertation-writing stage. It means that whatever topic you are interested in, there are likely to be faculty who are experts in the area, and just as excited about it as you are. At Northwestern, theory students don't find themselves

limited in their dissertation topics because of the more limited interests that often go along with having a small number of theory faculty, as can happen elsewhere.

Of course, a good graduate program is not merely one that offers the largest number of classes or has the most faculty. Equally important is the attitude that the faculty bring to courses and advising. Northwestern is well known for the attention and importance that the faculty put on teaching and training Ph.D. students. Northwestern's theory faculty are devoted to maintaining a high-quality program and to advising Ph.D. students, and this shows in the quality of instruction, the accessibility of faculty, and the placement record of Northwestern theory students, a record that we are very proud of. Some of the placements (as of Summer 2019) for theory students of the Northwestern Economics department have been at the following institutions:

California Institute of Technology (4)
Duke University
Harvard Business School
Harvard University
Princeton University (2)
University of California, Los Angeles
University of California, San Diego
University of Chicago
Yale University

The full list of placements (as of Summer 2019) for theory students of the Northwestern Economics department since 1995 is in the [appendix](#).

Seminars

There are *two* main weekly theory seminars. The [first](#) features faculty from other institutions presenting their work ([click here](#) for a list of previous speakers), while the [second](#) is a weekly "brown-bag lunch" seminar at which Northwestern faculty present their current research. Not surprisingly, these seminars are well-attended (the number of faculty in attendance is often greater than twenty) and very active. In addition to these seminars, students present their work in progress at a separate student theory lunch, and once a year student invite a speaker for a seminar open only to PhD students, which enables much closer interaction of students with the speaker.

Moreover, many [seminars](#) in related applied fields regularly include theory talks, including the industrial organization seminar, the political economy seminar, the finance seminar, the strategy seminar, and a theory seminar run by [EECS](#).

Visitors

In addition to the weekly seminar speakers, many theory faculties from other institutions visit Northwestern for longer periods of time. These include visitors invited by Kellogg (in particular MEDS), the Math Center, and the Center for Economic Theory (CET). Many of

these also teach advanced mini-courses while they visit (see [here](#) for some examples). In recent years theory students have also benefited from [Nemmers Prize](#) visitors, such as Ariel Rubinstein, Paul Milgrom, Daron Acemoglu, Jean Tirole, and David Kreps. Nemmers Prize visitors spend a quarter in residence and offer another advanced topic course while visiting (beyond those listed above).

Visitors in 2017-2019 include George-Marios Angeletos (MIT), Elchanan Ben-Porath (Hebrew University), Aislinn Bohren (Upenn), Ben Golub (Harvard), Nicolas Lambert (Stanford), Stephan Laueremann (Bonn), Barton Lipman (Boston University), and John Quah (Johns Hopkins). Previous year visitors can be found [here](#).

There are also many pre-doctoral visitors (listed [here](#)). These are Ph.D. students from other programs who have not yet completed their Ph.D., and who further enrich the theory environment at Northwestern.

Conferences

The Economics Department and Kellogg School also organize numerous conferences, more than at most leading departments. For example, in recent years Northwestern has hosted:

- The Nemmers Prize conference in honor of David Kreps, May 2019 ([info](#))
- CS+Economics Quarterly Workshop, Mechanism Design with Non-linear Utility, May 2019 ([info](#))
- CS+Economics Quarterly Workshop, Learning as a Solution Concept, November 2018 ([info](#))
- The Nemmers Prize conference in honor of Richard Blundell, May 2017 ([info](#))
- The Fourth Bounded Rationality in Choice Conference, June 2016
- The Nemmers Prize conference in honor of Jean Tirole, May 2015 ([info](#))
- Reimagining Decentralization: A Conference in Honor of Stanley Reiter, March 2015 ([info](#))
- Eighth Transatlantic Theory Workshop, September 2015

Some previous conferences are listed [here](#).

The Center for the Study of Industrial Organization ([CSIO](#)) also holds annual conferences such as [one](#) joint with faculty from Toulouse School of Economics, which has a strong theory component. Other conferences organized by CSIO can be found [here](#).

Financial Support

In addition to the regular funding offered by the Economics Department and Kellogg School, the [CET](#) supports Economics Department students with research assistant positions (one to three students obtain such support each academic quarter), in addition to the research assistant positions provided by faculty. CET has also provided funds for

students to participate in conferences and to obtain professional editors who improve their writing. Other forms of CET research support for students are also available.

Appendix: Full List of Placements

Arizona State University
Bates White, Washington DC
Bocconi University, Italy
Bonn University, Germany
Boston University
Bowdoin College
California Institute of Technology (4)
Catolica Lisbon School of Business and Economics, Portugal
Citadel LLC
City University of Hong Kong
Collegio Carlo Alberto
CUNEF Madrid
Duke University
European University Institute (2)
Georgia State University
Harvard Business School
Harvard University
Hebrew University of Jerusalem
Keio University, Japan
McKinsey and Company, Minneapolis
National University of Singapore
Ohio State University
Oregon State University
Pennsylvania State University
Princeton University (2)
Rice University (2)
Shanghai University of Finance and Economics (2)
Tel Aviv University (3)
Toulouse School of Economics (2)
University of British Columbia (3)
University of California, Los Angeles
University of California, San Diego
University of Chicago
University of Haifa
University of Minnesota (2)
University of Oxford (post-doc)
University of Queensland
University of Rochester
University of Southampton, United Kingdom
University of Southern Florida
University of St. Gallen

University of Texas, Austin
University of Toronto
University of Toronto (Business School)
University of Western Ontario
Yale University