

Graduate Connection

Vol. 23 No. 2

December 2017

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News

Happy Holidays!

The faculty and staff extend their best wishes for a happy holiday season. The University will be officially closed from the end of business on Thursday December 21 and reopen on the morning of Tuesday January 2. Winter quarter commences on Monday, January 8.

Distinguished Teaching Assistants

The Distinguished Teaching Assistant Awards for 2016-17 were presented at the start-of-year buffet on October 15. The winners of a certificate, a limited edition coffee mug, and a year's subscription to *Econometrica* were **Sergio Armella Olazabal, David Benson, José Carreno-Garcia, Gabriela Cugat, Ricardo Dahis, Ana Danieli, Jamie Daubenspeck, Loren Fryxell, Joseph Hardwick, Matthew Leisten, Giacomo Magistretti, James Myatt, Dmitry Sedov, and Alex Theisen.** These awards are given to the top third of our Teaching Assistants, based on student and faculty evaluations. These awards have been listed prominently on the vita of our students on the job market, and act as a strong signal to potential employers of your teaching capabilities. This is especially true for students from countries where English is not the first language.

Susan Bies Research Prizes

Also at the Buffet, the Department presented the annual Susan Schmidt

Bies Prizes for Doctoral Student Research on Economics and Public Policy. The awards are given to the best public policy papers presented as part of the Economics 501 seminar. The winners for 2016-17 were **Victoria Marone** for a paper on "Bending the Cost Curve the Wrong Way? Evaluation of Medical Loss Ratio (MLR) Regulation in the Health Insurance Industry," and **Laia Navarro-Sola** for the paper "Distance Secondary Education in Rural Communities: Evidence from the Mexican Telesecundaria." The prizes were generously donated by alumna **Susan Schmidt Bies** (PhD, 1972). Her professional career included serving on the Board of Governors of the Federal Reserve System.

Robert Eisner Memorial Fellowship

Also awarded at the buffet was a fellowship to honor the late faculty member and AEA President Robert Eisner. For 2017-18 the Fellowship was awarded to **Gabriel Ziegler**. The fellowship is awarded annually to a fourth year student who has distinguished her or himself in both teaching and research.

Congratulations

Stephanie Johnson and **Chiara Maggi** were selected as 2018 Kauffman Foundation Dissertation Fellowship holders.

Professors **Ron Braeutigam** and **Eric Schulz** were chosen for the 2016-17 Faculty Honor Roll award organized by the Associated Student Government. Undergraduate students nominated professors that go above

Published 3 times a year in
September, December and
March by:

Department of Economics
Northwestern University
2211 Campus Drive
Evanston, IL 60208
www.economics.northwestern.edu

Ian Savage, *editor*
847-491-8241
ipsavage@northwestern.edu

and beyond expectations, and the winners were selected from the list of nominations as faculty members who are truly exceptional.

Staff News

Christy Anderson has joined us as Assistant Director of Administration. This role includes being coordinator of our undergraduate program. She replaces **Sarah Muir Ferrer** who is now with the NU Chicago Field Studies program.

Greg Schrader has joined us as our IT specialist. He was previously with the Medill school. **Karl Brown** who was temporarily covering this position has returned to working on IT in the banking industry.

Visitors

Three of our existing post-doc visitors will remain with us for the entire academic year: **Michael Andrews**, **Fabrice Tourre**, and **Melanie Xue**.

We will have additional visitors in the Spring Quarter. Further details will be provided in the March *Graduate Connection*.

Events

AEA Annual Meeting

The annual meetings of the American Economic Association will be held in Philadelphia on Friday to Sunday, January 5-7. If you are at the conference, stop by the NU annual cocktail party in Room 415 of the Marriott Downtown, 1201 Market Street, from 6-8pm on the Friday.

Martin L. King Jr. Day

On Monday, January 15, the University is closed and all classes are canceled in observance of Dr. Martin Luther King Jr. Day.

Mark Your Calendars

Mark your calendars for these special events in the Spring Quarter. Full details will be given in the March *Graduate Connection*.

- April 3 (Tuesday): Prospective graduate student visit day.
- April 30 (Monday) at 5:30pm: Nancy L. Schwartz Memorial Lecture featuring Susan Athey of Stanford University at the Allen Center.

Teaching

Seminar Registrations

The Department will not be offering Econ 501 and the 500-level workshop classes in the Winter Quarter when these classes usually do not meet. They will return in the Spring Quarter. Students who need to register for additional credits to maintain full-time status should use Econ 590 (for second year students) and TGS 500 (for older students).

Advice on Field Sequences

The Department has guidance on acceptable field course sequences. These are posted in the Graduate > Goals and Requirements > Second and Third Year Goals section of our website.

This Quarter's Course Descriptions

The Department has a policy to avoid the problem of excessive awarding of incomplete grades. Please see the "Goals for Second and Third Year Students" page of our web site for a complete statement. Report any problems to the Director of Graduate Studies.

Economics 412-2

Economic Theory and Methods
Professor Ely
MW 1:00-2:50 KGH 1410

The course will survey the literature on the design of information structures in games and principal-agent problems. The class will be based on regular readings, lectures and discussions. Evaluation will be by student presentations.

Economics 414-2

Economics of Information
Professor Guo
TTh 11:00-12:50 KGH 1410

This course covers the major topics of mechanism design without monetary transfers. Students will review a series of papers including the very recent contributions and focus on analytical tools. Among the topics covered are: delegation, dynamic mechanisms, matching (in particular school choice), and evidence models.

Students will be required to submit two referee reports and make an oral presentation.

Economics 416-1

Advanced Macroeconomics
Professor Berger
TTh 3:30-5:20 KGH 3301
Class will move to KGH 1410 after junior recruiting ends

This is an empirical course with a focus on using micro data and models with microeconomic heterogeneity to understand macro phenomenon. Recent increases in computational power and the availability of "big data" have been transformational. The use of micro data provides additional discipline on macroeconomic models and often leads to insights or conclusions that differ from analysis using aggregate data alone.

This course will build the computational and empirical tools necessary to bring micro data to heterogeneous agent macro models

and discuss multiple ways to use micro data to discipline and test macroeconomic models.

The first half of the course will focus mainly on building up classic results and computational tools for both household and firm models. The focus will be on recent applications and current questions in empirical macroeconomics. Some particular applications include the role of transaction costs and lumpy adjustment, the effects of economic stimulus, the aggregate implications of volatility and uncertainty and understanding the aggregate dynamics of consumer durables, inflation and investment. The second half will introduce students to more recent applied micro techniques that have been used to test macro models with a special attention to geographic variation. The focus of this module will be on identification, interpretation, and exploring the macro implications of these new research approaches.

Economics 420-2

European Economic History

Professor Mokyr

TTh 9:00-10:50

KGH 3301

The course will be devoted to recent papers in economic history written in the language and tradition of modern economics. In the past decade, a great deal of economic history has been written by scholars (some full-time economic historians, others part-timers and interlopers) who are applying economic theory and econometric methods to historical issues and have produced and utilized new and innovative databases. The purpose is to survey a sample of this recent literature, provide it with more historical context and motivation, and stimulate similar research.

After an introductory lecture by the instructor, the course will be student-driven. Each student will be in charge of a number of class presentations of the chapters and papers below (starting with week 2). The readings (a substantial proportion which are

“packages” of two papers) will be allocated on a first-ask first-serve basis, subject to the constraints (1) that all papers have to be covered and (2) that distribution is about as equitable as is humanly possible and (3) nobody presents twice in one week. Each student will prepare a powerpoint lecture of about 30-45 minutes on her/his assigned papers, summarizing the most interesting and important findings, while reviewing the methodology and sources used.

Economics 425-2

Theory of Economic Development

Professors Beaman and Udry

TTh 1:30-3:20

KGH 3301

The focus is the study of household organization, agriculture, labor markets, migration, targeting and behavioral economics, education, health and human capital. A primary goal of this course is a critical reading of the current literature on the empirical microeconomics of development.

You are expected to do all of the required reading and to participate in class discussion. Evaluation will be based on a series of assignments and a research project.

Economics 440-1

Economics of the Labor Market

Professor Notowidigdo

MW 9:00-10:50

KGH 3301

This course studies topics in labor economics, surveying both theoretical and empirical work in the field. The topics will be focused around the core areas of labor supply, labor demand, and human capital.

The theoretical models will include dynamic labor supply models, models of skill-biased technological change, and models of signaling, skill premia, and self-selection. The empirical work will focus on recent papers studying human capital, inequality, trade / offshoring, and immigration.

Evaluation will be by several problem sets, which include both theoretical and empirical work, as well as a comprehensive final exam.

Economics 450-2

Industrial Organization and Prices

Professors Bhattacharya and Porter

MW 11:00-12:50

KGH 1410

This course is an introduction to several topics in industrial organization theory and empirical analysis. Topics include: price discrimination; entry, growth and turnover; cartels and collusion; advertising and information disclosure; auction markets and bidding. The emphasis will be on the estimation and testing of game theoretic models, and especially on recent developments in the field.

Evaluation will be by several problem sets and a final exam. Economics 450-1 is a prerequisite for this course.

Economics 460-2

International Economics

Professors Matsuyama and Mestieri

MW 1:30-3:20

KGH 3301

This course and 460-3 in the Spring will be team taught by Professors Matsuyama and Mestieri. This quarter covers the foundations of international trade and modern economic growth. Topics include: endogenous growth theory, Ricardian trade theory, factor proportions, specific factors and new trade theory with applications to firm heterogeneity, the skill premium and the direction of technological change. Then 460-3 in spring will cover selected current research topics, including guest lectures by Ufuk Ackigit, Jing Zhang, Jonathan Dingel and Rodrigo Adao on their current research (with 2 lectures by each).

Economics 481-2

Econometrics

Professor Auerbach

MW 3:30-5:20

KGH 3301

Econometric Tools for Network Data. An introduction to various econometric methods for social and economic networks. Preliminary topics include models of social interaction and network formation, community detection, contagion and shock propagation, and sampling. About two-thirds of the course will focus on theory (i.e. proving things) while the remaining one-third will focus on computational issues and empirical applications. Some course material may be altered to reflect the interests of enrollees.

Evaluation will be by a project proposal that may be theoretical or empirical in nature.

Finance 585-2

Asset Pricing II

Professor Papanikolaou

T 10-12:50

KGH 5301

Note time change. This course covers advanced topics in the intersection of finance and macro. The class will emphasize current topics in financial economics along with the state-of-the-art tools necessary to make progress towards answering the important questions in the field.

The first part of the course covers the basics of dynamic models of arbitrage pricing, portfolio choice, and equilibrium in frictionless markets. The second part of the course covers a selection of topics of current interest: asymmetric information models, borrowing constraints and other frictions, models with non-standard preferences, models with production, etc.

Students will be required to hand in problem sets, which will emphasize both analytical as well as numerical skills. Familiarity with a modern computing language (MATLAB, Julia or C++) will be assumed.

Though the course will proceed at a brisk pace, familiarity with the material in FINC 585-1 is not required.

Finance 586-2

Corporate Finance II

Professors Benmelech and Sapienza

F 9-11:50

KGH 4302

This course provides a theoretical and empirical treatment of major topics in empirical corporate finance, including: capital structure and financial contracting; real investment behavior; financial intermediation; financial distress; corporate governance; and law and finance.

FINC 586-1 is a prerequisite. The aim of this course is to prepare Ph.D. students to do research in empirical corporate finance.

The course discusses empirical papers that are related to the theories formulated in FINC 586-1. In addition it will help students to develop identification strategies for testing corporate finance hypothesis. The course is organized around published and working papers in the field with an emphasis on understanding how to develop good research ideas. Rather than providing an exhaustive overview of the field, the course focuses in depth on selected topics to illustrate different empirical approaches to the same or related questions.

MECS 540-2

Political Economy II: Conflict and Cooperation

Professor Baliga

M 3-5:50

KGH 4130

This course will offer a theoretical treatment of conflict. Strategic interaction within and across nations involves conflict and cooperation. Disagreement between a country's population and its leadership can cause internal conflict, oppression and terrorism. Disagreement between countries can lead to war, costly arms races and impede economic development. Conflict often arises

even though there is some cooperative solution that would have satisfied all the relevant actors. The course will study the fundamental causes of conflict (positive analysis) and possible solutions that create cooperation (normative analysis).

MECS 550-3

Economic Theory III: Doing Research in Economic Theory and Related Areas

Professor Sandroni

T 1-3:50

KGH 4130

The main objective of this course is to find good dissertation projects and, hence, facilitate the transition from student to researcher. To this end, this course relies on informal discussions of ideas and student presentations of potential research projects (after the first two or three classes). There are no exams. The topics depend on students' interests that are typically determined in the first and second classes. Some initial suggestions include: contract theory and the law; communication and censorship; group decisions; the theory of mind and its application to macroeconomics, IO and game theory; the structure of optimal law; diplomacy; network theory; voting and the structure of political parties.

MECS 551-2

Health Economics II

Professor Dranove

M 12:45-3:50

KGH 4273

This is the second quarter of a two-quarter sequence. Enrollment in MECS 551-1 this past Fall is a strict prerequisite.

MECS 560-2

Dynamic Optimization in Economics

Professor Shmaya

W 4-6:50

KGH 4301

The course covers the basic models and mathematical techniques for

discrete time dynamic optimization under uncertainty (stochastic control): Bellman equation and the principle of optimality in finite and infinite horizon environments, stopping time problems, multi-armed bandit and Gittins' index theorem, approximation methods for problems with large state spaces, and regret analysis in multi-armed bandit problems.

Optional textbooks: Sheldon Ross, *Introduction to Stochastic Dynamic Programming* (Academic Press, 1995); Dimitri Bertsekas, *Dynamic Programming and Optimal Control* (4th edition, Athena, 2012 and 2017); and S. Bastian Bubeck and Nicolo Cesa-Bianchi, *Regret Analysis of Stochastic and Nonstochastic Multi-armed Bandit Problems* (Now Publishers, 2012).

Evaluation will be by a final exam.

KPHD 540

Computational Social Science:
Methods and Applications
Professor Pah
W 1:30-4:20 KGH 5201

The digital, connected, sensor rich world is generating extraordinary amounts and variety of data. Computational social science is an exciting new scientific perspective that incorporates new methods and models for studying human behavior from the level of neurons to collective behavior. This change in approach has already made breakthroughs possible in understanding human creativity, scientific performance, the sharing economy, human conflict, and consumer behavior.

This seminar will teach computational analysis skills. These skills include programming, data gathering from the web, network analysis, data mining for unstructured data (topic models, bag of words, etc.), and conducting quantitative analysis of textual sources. Students will be evaluated through a combination of assignments and a self-chosen and directed research project. Students will leave the course with the technologies and

intuitions needed for sophisticated independent research.

Formal Announcements

Funding Guidelines

The Department has formal rules for the allocation of funding for students in years two through six. These are described on the Graduate > Funding page of our web site. Please read this document as *the Department strictly enforces these funding criteria.*

Preliminary Examinations

First year students should familiarize themselves with the Department's rules on continuation to the second year. These are posted in the "Goals for First Year Graduate Students" page of our web site.

Dates for the prelim examinations for the coming year have been set. The ordering of the three examinations rotates each year.
Monday July 16: Econometrics
Friday July 20: Microeconomics
Wed. July 25: Macroeconomics
All examinations will be held 1:30PM – 4:30PM in room 1410.

Students should note that they are exempt from the prelim exam in any area in which they achieved a GPA of 3.60 or greater in the three first-year classes (e.g. in 410-1,2,3 for the microeconomics prelim exam).

TA Periods in Residence

Each quarter that you are a TA, you are expected to be in Evanston on weekdays from the first day of classes until the Monday after examinations end (which is the day that grades are filed). Absences during this period require permission of the instructor. In the past people have left early and arrived back late, in some cases without informing the instructor. The

Department will not tolerate this. You must arrange your vacation airline flights so as to be able to fulfill your duties. This is especially true as you make travel arrangements for the coming holiday season. Failure to do so will be grounds for rescinding your TAship. For the coming year the dates for which you should be in attendance are:

Fall: until Mon Dec 11

Winter: Mon Jan 8 - Mon March 26

Spring: Tues Apr 3 - Mon June 18

Graduate School Deadlines

February 9 is the last day for return of the Application for a Degree for all candidates who expect their degrees to be awarded in March.

March 9 is the last day for submission of the COMPLETED dissertation and all supporting materials to the Graduate School for students who expect to receive the Ph.D. degree in March.

March 16 is the last day for receipt of the Final Examination Report and any Change of Grade forms to the Graduate School for Master's candidates who expect their degrees to be awarded in March.

Students Working on NSF Grants

The National Science Foundation (NSF) requires all students supported by them to undergo training in the responsible conduct of research. This will be accomplished by a one-time registration in ECON 519 that has two components: an online class and a "face-to-face" component. The online part asks the student to complete a 2-3 hour online class administered by a private company that Northwestern has hired. DGS Professor **Wojciech Olszewski** will lead the face-to-face part of the class.

If you are being supported on an NSF grants for the first time, please contact Professor Olszewski for instructions.

Funding Opportunities

NU Dissertation Year Fellowships

The Department has taken the pedagogical decision that Dissertation Year University Fellowships (DYUF) should be taken in the spring quarter of the year prior to going on the job market, and the fall and winter quarters of the job market year. To qualify for the spring quarter fellowship, students should ask their advisor to file the *Spring Certification of Intent to Enter the Job Market* (Form GS5) with the Graduate Program Coordinator between February 1 and February 15. This form is available from the Graduate.> Current Student Resources > Frequently Used Forms section of our web site.

NU Summer Fellowships

Summer Fellowships will again be available to students in years two through five (first year students will have been notified about summer funding in their offer letter). A signed acceptance form and contract will have to be submitted. This will occur in May. More details will be given in the next *Graduate Connection*.

Sixth year (and above) students should note that The Graduate School specifies that Summer University Fellowships are not available for students beyond year 5.

Funding for Research-Related Travel and Expenses

The Graduate School has available funds to pay for research expenses and for travel to conferences. The maximum one-time research grant is \$3,000, and there is funding for two conferences during your time at Northwestern that covers up to a maximum of \$800 for each conference. Full details of the application procedures and links to

application forms are on the funding web page.

Federal Aid Forms

If you are a U.S. citizen or a U.S. permanent resident you need to renew your FAFSA (Free Application for Federal Student Aid) application. You can complete the forms on-line at www.fafsa.ed.gov after January 1 and before June 30. The Graduate School recommends that you file by March 1. It is often useful to have completed and filed your 2017 income tax form (1040) before you complete the FAFSA.

Notes

Next Graduate Connection

Volume 23, number 3 will be published on March 1.
