

**CERGE-EI**

**Charles University in Prague  
Center for Economic Research and Graduate Education  
and  
the Economics Institute of the Academy of Sciences of the Czech Republic**

**Course Book for the Academic Year 2015-2016  
Spring Semester**

PhD Study Affairs Office

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*Printed version of this Course Book is subject to possible updates available  
at [https://iweb.cerge-ei.cz/phd/prog\\_details/coursebook/](https://iweb.cerge-ei.cz/phd/prog_details/coursebook/)*

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## I. THE STRUCTURE OF PH.D. STUDIES IN ECONOMICS AT CERGE

The Center for Economic Research and Graduate Education (CERGE) is a research and educational institute of Charles University. In close cooperation with the Economics Institute (EI) of the Academy of Sciences of the Czech Republic, CERGE offers a Ph.D. program in Economics, accredited by the Ministry of Education, Youth and Sport of the Czech Republic. Economic research is an integral part of CERGE activities.

### A. *Contents and Organization of Graduate Study at CERGE*

The basic mission of CERGE is to perform graduate studies in Economics and to train future university faculty and researchers and public administration representatives. The main idea of establishing the doctoral program curriculum is to transfer the modern Western system of Ph.D. study in Economics, as it is applied in the United States and some Western European countries, to the local environment and incorporate it into the structure of Czech university education within Charles University. The program offers economic education at a level comparable with world standards directly at Charles University, without the necessity of more expensive study abroad. Besides this fact, the best students may be offered the opportunity to visit (for up to one academic year) an appropriate university in the United States or Western Europe. This experience may enlarge their scope of knowledge significantly.

During the first two years of study courses are taught by the local and visiting faculty. Studies are conducted entirely in English. The duration of the doctoral study is four years. The first two years offer primarily systematic knowledge of theory; for the latter two years the students work on their dissertation. The transfer from study to independent research work is gradual and begins during the second year of study.

Further details on the program can be found in the handbook for graduate students.

### B. *Core Study – The First Two Years*

**In the first year** of study the students follow a common curriculum designed to provide a strong foundation in Microeconomic Theory, Macroeconomic Theory, Statistics and Econometrics, and Academic Writing. This curriculum is standard for the PhD study in Economics. The study is divided into three semesters: the fall semester (FS), the spring semester (SS), and the summer semester (SuS). In view of the fact that many newly recruited students do not have an extensive background in modern Economics equivalent to "western" standards, and also that their knowledge of Mathematics and English are frequently at different levels, a preparatory semester is organized for potential students. It allows CERGE to provide the students with some basic tools as an introduction to the program and to achieve a standard level of competence.

**The second year** of formal study at CERGE provides students with the opportunity to investigate more specific fields of interest. Several courses are offered each of the two semesters, and the second year students must enroll for a minimum of three, plus a course in English. The students participate in a seminar series and are now expected to begin their own research.

Having completed both the first and second years, students must pass a General (comprehensive) examination. After the first year, the students must pass Microeconomic Theory, Macroeconomic Theory, and Econometrics; after the second year they must show proficiency in at least two specialized fields by passing General (field) exams in their chosen areas of interest.

During the first two years of study the students do not have a special supervisor; rather, they rely on the advice of the Deputy Director of Graduate Studies, who is also one of the CERGE faculty members. The program and organization of graduate study is regulated by a CERGE's Graduate Council (GC).

### **C. Specialized Study – Third and Fourth Years**

During the spring semester of the second year and the fall semester of the third year, the students have to choose the topic of their dissertations. A tentative chair as a supervisor is then assigned. By the middle of the third year (at the latest), they formulate a thesis proposal and public defense is required together with state doctoral examination. For students who passed all General examinations with distinction, the main importance will be placed on the defense of the thesis proposal. Those with less than distinctive examination results can also expect additional detailed questions from respective fields. After having successfully defended the proposal, a three-member dissertation committee is appointed which guides and supervises the study and research work.

Under the guidance of this committee, the student works on his or her dissertation. In the fourth year the students present their third year work at the Dissertation workshop and prepare for the defense of the dissertation. The study is concluded by the public defense of the doctoral dissertation.

### **D. Study Program**

Here we present the courses designed for the preparatory semester, the first, second and third year of study. (One lecture/exercise unit is 45 minutes long.)

#### **Preparatory semester**

<b>Subject</b>	<b>(Lecture hours / exercise hours)</b>
Macroeconomics 0	4/2, Exam
Microeconomics 0	4/2, Exam
Mathematics	4/2, Exam

**Notes:** Upon completion of the preparatory semester, the final selection of students is made to enter the doctoral program in the fall, based on final exam results.

### First year

Subject	Fall	Spring	Summer
Microeconomics I, II, III	4/2, Exam	4/2, Exam	4/2, Exam
Macroeconomics I, II, III	4/2, Exam	4/2, Exam	4/2, Exam
Statistics / Econometrics I, II	4/2, Exam	4/2, Exam	4/2, Exam
Academic Writing I	---	4/0 Credit	---

#### Notes:

After completing the first year, each student must pass the General examination in the fields of Microeconomics, Macroeconomics and Econometrics.

### Second Year

Subject	Fall	Spring	Summer
Cross-Sectional Econometrics I, II	4/2, Exam	4/2, Exam	---
Energy Economics	4/2, Exam	---	---
Experimental Economics	---	4/2, Exam	---
Financial Markets I, II	4/2, Exam	4/2, Exam	---
Industrial Organization	4/2, Exam	---	---
Advanced Game Theory	---	4/2, Exam	---
Labor Economics I, II	4/2, Exam	4/2, Exam	---
Macro Topics	4/2, Exam	---	---
Time Series	---	4/2, Exam	---
Academic Writing II	4/0, Credit	---	---
Research Methodology Seminar	Mandatory	Mandatory	Mandatory
Combined Skills I	---	4/0, Credit	---
Research Seminars	0/2, Credit	0/2, Credit	---
Directed Research	---	---	0/2, Credit
Combined Skills II – M.A.	---	---	0/2, Credit

#### Notes:

\* Second-year students choose at least three (exam-ended) courses per semester. The courses cannot be from the same field. Courses offered may differ slightly from year to year, depending on the faculty in residence.

\* The credits for English courses, the Research Seminars and Directed Research are mandatory.

\* The credit for Research Methodology Seminar will be awarded based on individual consultations with the instructors and based on individual written work.

\* After completing the second year each student must pass General exam in two fields. Upon agreement of CERGE, a student may complete part of his/her study at another university - this is valid not only for individual courses, but also for a whole study year.

\* Topic courses are one semester courses not forming two semester sequence and do not cover comprehensively all material needed for Field General Exam.

\* Combined Skills II – M.A. is for M.A. students only, a paper or report appropriate for the MA-degree writing requirement.

### Third year

Subject	Fall	Spring	Summer
Combined Skills II – Ph.D.	Credit	---	---

**Notes:** Normally, students must pass the 2-year MA program first as a pre-requisite for registering in CSII-Ph.D.

## II. SYLLABI OF THE SPRING SEMESTER COURSES

### A. First year courses

#### MICROECONOMICS II

**Lecturers:**

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**Office hours:**

see the office door

#### Course information

This is the second course in the microeconomics sequence. The objective of the sequence in general and of the course in particular is to i) provide students with firm knowledge of the basic microeconomic theory, ii) provide students with grasp of relevant (micro)economic concepts on intuitive and formal level and iii) equip students with tools and techniques allowing them to conduct their own independent research.

The course is based on 24 90-minutes lectures and 12 90-minutes classes (exercise sessions). Two lectures and one class take place in any given week.

12 weekly problem sets are integral part of the course. Students are required to complete one problem set per week and hand it in before each class (details to be specified). The classes will be devoted to the discussion of problem set solutions. Team-work on the problem sets is encouraged. Free-riding on the effort of team-mates is not ... work on the problem sets is essential for grasping the course material and for exam preparation.

#### Course outline

1. General equilibrium under certainty
2. General equilibrium under uncertainty
3. Game theory

#### Requirements and grading

Grades will be based on final exam only. The final exam will take place in week 13 (details to be specified). There will be midterm exam in week 6 or 7 (details to be specified) with structure similar to

the final exam and hence indicative of students' standing in the course. In addition students are required to hand in 12 weekly problem sets.

## Readings

### Principal textbooks:

- ✓ Mas-Colell, Andreu; Michael D. Whinston and Jerry R. Green. Microeconomic Theory. Oxford: Oxford University Press, 1995. (henceforth MWG)
- ✓ Fudenberg, Drew and Jean Tirole. Game Theory. London: MIT Press, 1991. (henceforth FT)
- ✓ Osborne, Martin J. and Ariel Rubinstein. A Course in Game Theory. London: MIT Press, 1994. (henceforth OR)

### Reference (not required) books:

#### Microeconomic:

- ✓ Jehle, Geoffrey A. and Philip J. Reny. Advanced Microeconomic Theory. Essex: Pearson Education Limited, 2011.
- ✓ Varian, Hal R. Microeconomic Analysis. London: W. W. Norton & Company, 1992.

#### Mathematical:

- ✓ Aliprantis, Charalambos D. and Kim C. Border. Infinite Dimensional Analysis: A Hitchhiker's Guide. Berlin: Springer, 2007.
- ✓ Border, Kim C. Fixed Point Theorems with Applications to Economics and Game Theory. Cambridge: Cambridge University Press, 1989.
- ✓ Dixit, Avinash K. Optimization in Economic Theory. Oxford: Oxford University Press, 2002.
- ✓ Duggan, John. Basic Concepts in Mathematical Analysis.  
<https://dl.dropboxusercontent.com/u/17516137/RapidWeaverSite/resources/lecturenotes/MathHandbook13.pdf>, 2013.
- ✓ Chiang, Alpha C. Fundamental Methods of Mathematical Economics. London: McGraw-Hill, 1984.
- ✓ McLennan, Andrew. Advanced Fixed Point Theory for Economics.  
[http://cupid.economics.uq.edu.au/mclennan/Advanced/advanced\\_fp.pdf](http://cupid.economics.uq.edu.au/mclennan/Advanced/advanced_fp.pdf), 2014.
- ✓ Simon, Carl P. and Lawrence Blume. Mathematics for Economists. London: W. W. Norton & Company, 1994.
- ✓ Takayama, Akira. Mathematical Economics. Hinsdale, IL: Dryden Press, 1974. Huang, Chi-fu and Robert H. Litztenberger, Foundations for Financial Economics, North-Holland, 1988.

#### Game theory:

- ✓ Maschler, Michael; Eilon Solan and Shmuel Zamir. Game Theory. Cambridge: Cambridge University Press, 2013.
- ✓ Myerson, Roger B. Game Theory: Analysis of Conflict. London: Harvard University Press, 1991.

## MACROECONOMICS II

**Lecturer:**

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Taras Hrendash

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**Office hours:**

TBA

### Course information

We will study some macro topics. Listed below are the main references in the order of discussion. You are strongly advised to read the papers in advance of lectures since the lectures will build on the basic understanding of the papers.

### Requirements and grading

The grade is based on the midterm exam (one-third), the final exam (one-third) and occasional home problems (one-third).

### Readings

- ✓ Krusell, P. and Smith, A. (2015), "Is Piketty's "Second Law of Capitalism" Fundamental?" *Journal of Political Economy* 123: 725-748.
- ✓ Aghion, P., Bloom N., Blundell, R., Griffith R., and Howitt, P. (2005), "Competition and Innovation: An Inverted-U Relationship," *Quarterly Journal of Economics* 120: 701-728.
- ✓ Acemoglu, D. and Akcigit, U. (2012), "Intellectual Property Rights Policy, Competition and Innovation," *Journal of the European Economic Association* 10: 1-42.
- ✓ Huggett, M. (1993), "The Risk-Free Rate in Heterogeneous-Agent Incomplete-Insurance Economies," *Journal of Economic Dynamics and Control* 17: 953-969.
- ✓ Huggett, M. (1996), "Wealth Distribution in Life-Cycle Economies," *Journal of Monetary Economics* 38: 469-494.
- ✓ Gertler, M., Kiyotaki, N., and Queralto, A. (2012), "Financial Crises, Bank Risk Exposure, and Government Financial Policy," *Journal of Monetary Economics* 59: S17-S34.
- ✓ Gertler, M. and Kiyotaki, N. (2015), "Banking, Liquidity, and Bank Runs in an Infinite Horizon Economy," *American Economic Review* 105: 2011-2543.
- ✓ Michaillat, P. and Saez, E. (2015), "Aggregate Demand, Idle Time, and Unemployment," *Quarterly Journal of Economics* 120: 701-728.
- ✓ Acemoglu, D. and Shimer, R. (1999), "Efficient Unemployment Insurance," *Journal of Political Economy* 107: 893-928.
- ✓ Ales, L., Kurnaz, M., and Sleet, C. (2015), "Technical Change, Wage Inequality, and Taxes," *American Economic Review* 105: 3061-3101.



## ECONOMETRICS I

**Lecturers:**

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**Teaching assistants:**

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**Office hours:**

regular – Wednesday 14:00-15:00 and by appointment

**Class website:**

<http://cms.cerge-ei.cz/course/view.php?id=191>

### Course information

This is a first course in econometrics. The objective is to give students an opportunity to understand econometric theory and to explore a variety of useful econometric applications, including data management. Obviously, it builds on the material covered in Statistics and extends it into regression-type models. Students will make regular use of the microcomputer. They will use STATA and TSP (or another econometric packet) for certain problem sets.

Some supplementary exercises – data management (using databases [MS Access], using spreadsheets [MS Excel], or and STATA), using econometric software (short introduction to STATA and TSP), will be prepared. If required by students, optional computer sessions will be provided.

As it is standard for introductory econometrics, the core of the course will deal with regression models and their variations. We will spend several lectures on testing linear and non-linear hypotheses, identification issues and appropriate use of instrumental variable estimation. If time permits, we will also cover special topics like bootstrapping, and introduction into time series and linear regression model with panel data.

**Requirements and grading:**

Problem Sets 30%, Midterm 30%, Final 40%.

**Course outline:**

1. Background/Introduction
  - ✓ Review of estimation and testing theory
  - ✓ Introduction to linear regression model (via scale and location problem)
2. Single-equation linear regression model
  - ✓ Specification, assumptions, identification
  - ✓ OLS estimator (with small- and large-sample inference)
  - ✓ Estimation and testing
  - ✓ Violations of basic assumptions: Heteroskedasticity and autocorrelation

- ✓ Specification testing, data problems, etc.
  - ✓ MLE estimation and related testing procedures (LM,LR,W), testing of nonlinear hypotheses
3. Single-equation linear regression model with an endogenous RHS variables: instrumental variable estimation
    - ✓ Identification
    - ✓ IV estimator, 2SLS, GMM
    - ✓ Estimation and testing in presence of heteroskedasticity and autocorrelation
    - ✓ Testing for endogeneity, over-identifying restrictions, etc.
  4. Simultaneous Equation Models
    - ✓ Introduction: usual identification problems and their solutions
    - ✓ Identification by exclusion restrictions, cross-equation restrictions, etc.
    - ✓ Estimation of the reduced form equation
    - ✓ Single equation methods: ILS, 2SLS, MLE, selection of instruments, etc.
    - ✓ Full system methods: 3SLS, FIML
    - ✓ Efficiency and consistency; testing of endogeneity and specification
  5. Panel Data – combining time series and cross-section
    - ✓ Pooled OLS
    - ✓ Fixed effects model, random effects model, Hausman test, etc.
    - ✓ Estimating and testing: Heteroskedasticity and serial correlation
  6. Introduction to time series
    - ✓ Specific features of time series data
    - ✓ Autoregression, stationarity, invertibility, AR(p), MA(q), ARMA(p,q)
    - ✓ Integrated processes, test of unit roots, cointegrated analysis

## Readings

As the main text we will use: William, H. Greene, *Econometric Analysis*, Second (and up) Edition, New York, Macmillan, 1993-2012 (G) Any good introductory econometric book (with matrix algebra), however, will do about the same job. Additional materials will be provided during the course and will be available on-line on course web-page (above)

Examples of additional references (check the library for more options):

- ✓ Wooldridge, Jeffrey M. *Introductory Econometrics: A Modern Approach* (Second Edition). Thomson/South-Western, 2003.
- ✓ Wooldridge, Jeffrey M. *Econometric Analysis of Cross Section and Panel Data*. The MIT Press, 2002.
- ✓ Peter Kennedy, *A Guide to Econometric*, Third Edition, Cambridge, MIT Press, 1992.
- ✓ Jan Kmenta, *Elements of Econometrics*, Second Edition, New York, Macmillan, 1986. (K)
- ✓ G.S. Maddala, *Econometrics*, McGraw-Hill, International Edition, New York, 1977. (M1)
- ✓ G.S. Maddala, *Introduction to Econometrics*, Macmillan, New York, 1988. (M2)

## ACADEMIC WRITING I

### Lecturers:

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### Office hours:

TBA

### Course information

This course is the first step into PhD level writing in Economics. We focus on ways that writing at this level differs from other types of writing. Students will practice their critical/analytical reading and writing skills in formal, post-graduate level English. There is an emphasis on accurate and effective citation and referencing, and the types of formal language used in professional texts in the field. The course includes lectures, peer review during the writing process, and scheduled mandatory individual consultations with the instructor. Extensive written feedback on the work is given with a view to assist in future writing.

The final task will be a written comparative critique of two related articles in the field of Economics. Students will choose articles/topics that reflect their personal interests in the field.

The skills practiced on this course are designed to support student writing throughout their first two years of study and beyond, when they must write a range of professional level papers.

### Requirements and grading

Summary of an article	10%
Annotated bibliography	20%
Peer analysis	20%
Analytical summary	50%

100% attendance is mandatory. Any necessary absences must be discussed with your instructor, preferably in advance, and any work missed must be made up. Missing more than two classes will impact your grade for the course. We do not accept late submissions of any task, unless the student has documented an official illness or other issue with the SAO. Any late submission will be graded 0 automatically.

## ***B. Second year courses***

### **CROSS-SECTIONAL ECONOMETRICS II**

**Lecturer:**

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**Teaching assistants:**

TBA

**Office hours:**

TBA

#### **Course information**

This class continues Cross-Sectional Econometrics I. The main topics of the class are econometric approaches to the problem of sample selection and (individual) heterogeneity. While the methods apply more generally, the class will focus on methods to address the selection problem from the program evaluation literature and place particular emphasis on heterogeneity in experiments in the second part of the course.

#### **Course outline**

1. Sample selection and its consequences for econometric evaluations: Theory and Evidence
2. Methods to address sample selection
  - a. Selection on observables only:
    - i. Models of selection and control function approaches
    - ii. Re-weighting
    - iii. Matching
  - b. Allowing for selection on unobservables
    - i. Experiments
    - ii. Quasi-Experiments
3. Heterogeneity
  - a. Implications
    - i. Selection on treatment effects and the correlated random coefficient model
    - ii. Treatment effect parameters
    - iii. IV, heterogeneity and local average treatment effects
  - b. Methods for Heterogeneity
    - i. Testing for heterogeneous effects
    - ii. Effects on the distribution of outcomes
    - iii. The distribution of treatment effects

#### **Requirements and grading**

50 % problem sets and course project, 50 % final.

## Readings

The class mainly relies on a reading list and articles that will be posted on CMS by the beginning of the term. The following books cover a few of the topics and provide good reviews of basic issues:

- ✓ Cameron, A. Colin and Pravin K. Trivedi (2005). *Microeconometrics: Methods and Applications*. Cambridge University Press.
- ✓ Deaton, A. (1997) *The analysis of household surveys: A microeconomic approach to development policy*, Baltimore and London: Johns Hopkins University Press for the World Bank.
- ✓ Greene, William H. (2011) *Econometric Analysis*, 7th edition, Prentice Hall.
- ✓ Wooldridge, J.M. (2002). *Econometric Analysis of Cross Section and Panel Data*. MIT Press.

## ADVANCED GAME THEORY

### Lecturer:

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(Ludmila.Matyskova@cerge-ei.cz)

### Office hours:

TBA

## Course information

This course is in part the continuation of the Industrial Organization (IO) sequence from the Fall 2015 and in part on the issues from the advanced game theory. One of the goals is to further familiarize students with the major topics in IO, notably core oligopoly theory and in parallel, to illustrate methodological tools for conducting research. The main focus will be on theoretical issues. We will cover *in the sequence* several subjects including, but not limited to strategic oligopoly theory, dynamic games, bargaining, implications of asymmetric and/or incomplete information, mechanism design and auction theory. The course will follow various field articles.

## Requirements and grading

The course will be accompanied by exercise sessions. 50% of the course grade will be based on a final exam, 40% on a midterm exam and 10% on the presentation of a selected article (either one of the papers on the regular syllabus that we haven't covered in class, or of your choice – permission required). The presentation shall involve a **critical** analysis of the model, its assumptions, the findings and the possible extensions. This requires an extensive knowledge of the related literature.

## Readings list

### Principal textbooks

- ✓ Tirole, Jean: *The Theory of Industrial Organization*, MIT Press, 1989 (henceforth, Tirole, 1989).
- ✓ Belleflamme, P., and M. Peitz: *Industrial Organization—Markets and Strategies*, Cambridge University Press, 2010 (henceforth, Belleflamme and Peitz, 2010).
- ✓ Osborne, J. M. and A. Rubinstein: *Bargaining and Markets*, Academic Press, 1990.
- ✓ Etro, Federico: *Competition, Innovation and Antitrust, A Theory of Market Leaders and Its Policy Implications*, Springer Verlag, 2007. (henceforth, Etro, 2007).

### Recommended and supplementary textbooks

- ✓ Binmore, Ken: *Fun & Games*, D.C. Heath, 1992.
- ✓ Fudenberg, Drew and Jean Tirole: *Game Theory*, MIT Press, 1991.
- ✓ *Handbook of Industrial Organization Vol. I and II*, eds. R. Schmalensee and R. Willig, Amsterdam: North-Holland, 1989.
- ✓ *Handbook of Industrial Organization Vol. III*, eds. M. Armstrong and R. Porter, Amsterdam: North-Holland, 2007.
- ✓ Gibbons, Robert: *Game Theory for Applied Economists* Paperback, Princeton, 1992.
- ✓ Martin, Stephen: *Advanced Industrial Economics*, Blackwell, 1993.
- ✓ Mas-Colell, A., M. Whinston and J. Green (1995), *Microeconomic Theory*, Oxford University Press (henceforth, MWG, 1995).
- ✓ Shy, Oz: *Industrial Organization, Theory and Applications*, The MIT Press, 1996.
- ✓ Spiegler, R., *Bounded Rationality and Industrial Organization*, Oxford University Press, 2011.
- ✓ Sutton, John: *Sunk Costs and Market Structure: Price Competition, Advertising, and the Evolution of Concentration*, MIT Press, 1991.
- ✓ Vives, Xavier, *Oligopoly Pricing; old ideas and new tools*, The MIT Press, 2000, (henceforth, Vives, 2000).
- ✓ Vives, Xavier, *Information and Learning in Markets: The Impact of Market Microstructure*, Princeton University Press, 2010.
- ✓ Wolfstetter, G. Elmar *Topics in Microeconomics*, Cambridge, 2002

### Recommended web site

INTERTIC; [www.intertic.org](http://www.intertic.org)

Topics & Readings (this is a **tentative** outline of what we plan to cover in the Spring semester)

#### 1. Models of Oligopolistic Competition (cont.)

- ✓ Etro, 2007; Chapters, 1-3
- ✓ Tirole, 1989; Sections 5.1, 5.2, 5.4, 8.2.1.
- ✓ MWG, 1995; Section 12.C.
- ✓ Belleflamme and Peitz, 2010, Chapters, 3-4
- ✓ Etro, F. (2006), "Aggressive Leaders," *Rand Journal of Economics*, 37, 146-154.
- ✓ Novshek, W. (1985), "On the Existence of Cournot Equilibrium," *Review of Economic Studies*, 52, 85-98.

- ✓ Etro, F. 2008, Stackelberg Competition with Endogenous Entry, *The Economic Journal*, Vol. 118, 531 (October), pp. 1670-97.
- ✓ Shapiro, C. (1989), "Chapter 6: Theories of Oligopoly Theory," in: *Handbook of Industrial Organization Vol. I*.
- ✓ Vives, 2000 Chapters 3, 4 and 5

## 2. Oligopoly Applications

### 2.1 Cournot Equilibrium, Evolutionary Processes

- ✓ Wolfstetter, E. (2002), chapter 3

### 2.2 Entry Deterrence/Accommodation

- ✓ Etro, 2007; Chapter 4
- ✓ Tirole, 1989; Sections, 8.2.1, 8.2.2.1, 8.3, 8.4.
- ✓ MWG, 1995. Section 12-App.B.
- ✓ Belleflamme and Peitz, 2010, Chapter, 16
- ✓ Bulow, J., J. Geanakoplos and P. Klemperer (1985a), "Multimarket Oligopoly: Strategic Substitutes and Complements," *Journal of Political Economy*, 93, 488-511.
- ✓ Bulow, J., J. Geanakoplos and P. Klemperer (1985b), "Holding Idle Capacity to Deter Entry," *Economic Journal*, 95, 178-182.
- ✓ Caves, R. and M. Porter (1977), "From Entry Barriers to Mobility Barriers," *Quarterly Journal of Economics*, 9, 241-267.
- ✓ Dixit, A. (1979), "A Model of Duopoly Suggesting a Theory of Entry Barriers," *Bell Journal of Economics*, 10, 20-32.
- ✓ Dixit, A. (1980), "The Role of Investment in Entry Deterrence," *Economic Journal*, 90, 95-106.
- ✓ Ellison, G., and S.F. Ellison, (2011), "Strategic Entry Deterrence and the Behavior of Pharmaceutical Incumbents Prior to Patent Expiration", *American Economic Journal: Microeconomics*, 3, 1-36.
- ✓ Fudenberg, D. and J. Tirole (1984), "The Fat Cat Effect, the Puppy Dog Ploy and the Lean and Hungry Look," *American Economic Review*, 74, 361-368.
- ✓ Fudenberg, D. and J. Tirole (1986), *Dynamic Models of Oligopoly*, London: Harwood.
- ✓ Gilbert, R. J. (1989), "Mobility Barriers and the Value of Incumbency," in: *Handbook of Industrial Organization Vol. I*, 476-531.
- ✓ Spence, M. (1977), "Entry, Capacity, Investment and Oligopolistic Pricing," *Bell Journal of Economics*, 8, 534-544.

### 2.3 Innovation and R&D

- ✓ Etro, 2007, Chapter 4
- ✓ Etro, F. 2004, Innovation by Leaders, *The Economic Journal*, Vol. 114, 495, 281- 310.
- ✓ Belleflamme and Peitz, 2010, Chapter, 18
- ✓ Vives, X. 2008. "Innovation and Competitive Pressure." *The Journal of Industrial Economics*, 56: 419-469.
- ✓ Kamien, I. M., E. Muller and I. Zang (1992), "Research Joint Venture and R&D Cartels," *American Economic Review*, 82, 1293-1306.
- ✓ Lee, T. and L. Wilde (1980), "Market Structure and Innovation: A Reformulation," *Quarterly Journal of Economics*, 194, 429-436.
- ✓ Loury, G. C. (1979), "Market Structure and Innovation," *Quarterly Journal of Economics*, 93, 395- 410.
- ✓ Senyuta, O and K. Žigić, "Managing Spillovers: an Endogenous Sunk Cost Approach", *Information Economics and Policy*, (forthcoming).

## 3. Chain Store Paradox

- ✓ Selten, Reinhard "The chain store paradox". *Theory and Decision* 9 (2): 127-159, 1978

4. Search Models

- ✓ Pissarides, Lecture Notes on Search, 2008, <https://www.esrc.ac.uk/my-esrc/grants/RES-035-25-0014/outputs/Download/0d68ed47-9dfc-4900-87c4-aa714ce3a0b1>

5. Bargaining and markets

- ✓ M. Osborne & A. Rubinstein, *Bargaining and Markets* Academic Press, 1990

6. Incomplete Monitoring

- ✓ Green & Porter, Noncooperative Collusion under Imperfect Price Information, *Econometrica*, Vol 52, January, 1984

**7. Boundedly Rational Consumers**

- ✓ Spiegler, Ran. "The Market for Quacks" *The Review of Economic Studies* 73, no. 4 (2006): 1113-1131.
- ✓ Spiegler, Ran. *Bounded rationality and industrial organization*. Oxford University Press, 2011.

8. Information in Markets

8.1 Auctions

8.2 Signalling

8.3 Information Cascades

- ✓ Vives, 2010
- ✓ Gibbons, 1992
- ✓ Wolfstetter, 2002



## LABOR ECONOMICS II

**Lecturer:**

Daniel Múnich

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**Office hours:**

Tue & Thu 14:00-16:00 (and anytime if doors are open)

Mariola Pytliková

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**Office hours:**

by appointment

**Teaching assistant:**

TBA

### Course information

The aim is to introduce students to the economic analysis of the labor market and provide them with fundamentals within the labor economics. Among others we will study important contemporary economic issues such as determinants and selectivity in migration, consequences of international migration and ethnic diversity, sources of wage inequality, the labor market impacts of taxation, minimum wage legislation and unemployment benefits, the impact of different forms of human capital on labor market outcomes, and workers' discrimination. The course will combine theoretical concepts, empirical evidence and empirical approaches including use of econometrics tools in labor market economics. Critical discussions about implications for public policy designs and policy experience will be encouraged.

The course has three major goals (i) to guide students through current theoretical and empirical understanding of major issues in the broad field of labor economics, (ii) to guide student's to own empirical research, (iii) to make students familiar with common research resources, standards of practice and approaches in the field. Throughout the topics, references will be made to empirical approaches (data and techniques econometric / identification strategies) and actual policies.

As for learning outcomes, first, the students will gain methodological skills. By studying the link between the economic theory and empirical testing, and by applying empirical research, the students will gain a critical understanding of how economic facts become established and how the policy recommendations are being formed. This will teach the students about the use of empirical testing and evidence in discussions of different economic issues. Second, the students will learn how to work with data and how to conduct an empirical research. Thirdly, the students by writing the essay with critical literature review will learn to write in a way that integrates the economic theory, the findings in the empirical literature and discussion of important economic policy and social issues. Finally, the course will train the students further in their oral presentation skills, since there will be presentations of students.

## Course outline

### LABOR SUPPLY

- ✓ Labor supply over business and life-cycle (DM)
- ✓ Family and work; Family policies (MP)
- ✓ Active labour market policies; Unemployment benefits (MP)
- ✓ Retirement and aging; Early retirement plans (MP)

### MODELS OF WAGE STRUCTURES

- ✓ Pay & productivity-wage determination within the firm, incentive pay, efficiency wages (MP)
- ✓ Changes in wage structures, income inequality (MP)
- ✓ Social mobility (MP)
- ✓ Job turnover, matching and search, unemployment duration (DM)

### ECONOMICS OF MIGRATION

- ✓ Economics of migration, introduction, trends and concepts (MP)
- ✓ Determinants of migration (MP)
- ✓ Selectivity in migration, models of migration and empirical evidence (MP)
- ✓ Immigrant performance and integration; the second generation (MP)
- ✓ Immigrants and innovation; International migration and globalization (MP)
- ✓ Impacts of immigration (MP)
- ✓ Immigration policy (MP)
- ✓ Diversity - Impacts of workforce diversity on firms and economies (MP)
- ✓ Emigration and source countries; Brain drain and brain gain; Remittances (MP)

### OTHER SPECIFIC ISSUES

- ✓ Effects of international trade and FDI, Production sharing (MP)
- ✓ Peer Effects (MP)

## Requirements and grading

Grades will be based on student's performance in the final exam (55%), a term paper i.e. a written assignment based on combination of critical literature review and descriptive evidence (20%) and presentation of the term paper at mini-conference (5%) and an empirical assignment (20%).

The aim of the term paper is to make students familiar with writing reports based on a carefully conducted academic literature review and descriptive statistical analyses on a topic of their own choice. The aim of the term paper is also to improve students' experience with working in (international) teams. The term paper is expected to be written by a team of two (max three) students. Students will present their essays at the "mini-conference", during which they will collect comments from teachers and other fellow students and discussants assigned to each term paper. The comments are aimed to improve the student final term paper, they are going to be graded upon.

The aim empirical assignments is to make students familiar with real empirical econometric analysis (using statistical package Stata) using real empirical data and estimating selected models. Exercise sessions will be scheduled irregularly and will focus mainly on empirical research practices (data work, statistics, and econometrics) related to the syllabus.

Detailed information, announcements, lecture materials (readings, links, lecture handouts, etc.) and details about assignments and exercise sessions will be made available in advance via course web page.

## Readings

Selected chapters from

- ✓ HBLE (Handbook of Labor Economics, Vol. 1, 2, 3, 4A, 4B, Edited by O. Ashenfelter, R. Layard and D. Card, Elsevier) at <http://econpapers.repec.org/bookchap/eeelabhes/>
- ✓ Borjas George: Labor Economics, Sixth Edition.
- ✓ Ronald G. Ehrenberg and Robert S. Smith: Modern Labour Economics: Theory and Policy.
- ✓ Tito Boeri and Jan van Ours (2013) The Economics of Imperfect Labor Markets: Second Edition. Princeton University Press.
- ✓ Filer, Randall. K., Hamermesh, Daniel S. and Albert Rees (1996) "The Economics of Work and Pay" Harpers Collins.

#### Auxiliary reference texts

- ✓ Econometric Analysis of Cross Section and Panel Data, [W], Jeffrey M. Wooldridge, MIT Press, 2002.
- ✓ Econometrics Analysis, [G], William H. Greene.
- ✓ Analysis of Panel Data, [H], Cheng Hsiao, Cambridge U. Press, 1986.
- ✓ Limited-dependent and Qualitative Variables in Econometrics, [M], G.S. Maddala, Cambridge U. Press, 1983.
- ✓ A Guide to Econometrics, Peter Kennedy.
- ✓ Labor Economics, George Borjas.
- ✓ Filer et al., The Economics of Work and Pay.

Additional readings (papers) will be provided for various subtopics before and after particular lectures.

## FINANCIAL MARKETS II

**Lecturer:**

Fabio Michelucci

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**Teaching assistant:**

TBA

**Office hours:**

TBA

### Course information

The course will be based on some selective chapters from Jean Tirole's Theory of Corporate Finance. The objective of the course is to provide a thorough coverage of some of the core problems in Corporate Finance and Corporate Governance and to illustrate the modeling tools that are typically used in the literature.

Even though the textbook will guide us through the literature, the course will also be based on papers. Each student is expected to read the material that will be proposed before each class and to contribute to the discussion. Students will receive homework that will be solved during TA class, but

will not be marked. They will also be required to present a paper.

### **Course outline**

The plan is to cover roughly one chapter of Tirole's book per week and integrate the material in the book with some key related researcher papers.

### **Requirements and Grading**

Final Exam: 75%  
Presentation 25%

Please note that depending on the number of students enrolled, it might not be possible to run presentations. In that case, the exam would count for 100%.

Problem sets will be assigned during the course and students are expected to solve them before class. However, they will not count for the determination of the final mark.

### **Reading list**

Main Textbook: Tirole, The Theory of Corporate Finance

Useful books:

- ✓ Ross, Westerfield, and Jordan, Fundamentals of Corporate Finance (undergraduate level book to familiarize with the main concepts in Corporate Finance).
- ✓ De Matos, Theoretical Foundations of Corporate Finance (Only covers some selected topics).
- ✓ Bolton and Dewatripont, Contract Theory; Laffont and Martimort, The Theory of Incentives; Salanie, The Economics of Contracts; (these three books are useful for a better understanding of principal-agent problems. The third one is more introductory).
- ✓ Freixas and Rochet, Microeconomics of Banking (for a more detailed expositions of the literature on banking).
- ✓ Hart, Firms, Contracts and Financial Structure (very good for the Property Right Approach to Corporate Finance).

## EXPERIMENTAL ECONOMICS

**Lecturer:**

Michal Bauer

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**Teaching assistant:**

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**Office hours:**

TBA

### Course information

This is a graduate-level topics course in Experimental Economics. The aim is to expose students to multiple potential research topics and related literature. Hands-on participation in in-class experiments will be an integral part of the course. Basic background in Microeconomic Theory and Game Theory is assumed. The first part of the course will be based on lab experiments and the second part will cover field experiments.

### Course outline

#### Part 1 (Lab experiments):

Note: due to the time constraint, we will cover only selected topics. During the first class, we will discuss which topics to cover.

1. Introduction and Methodology
2. Other-regarding Preferences
  - Dictator game
  - Ultimatum game
  - Understanding other-regarding preferences
3. Trust, Reciprocity and Principal-Agent Games
  - Trust game
  - Reciprocity game
4. Cooperation and public goods
  - Prisoners' Dilemma
  - Voluntary contributions game
  - Voluntary contributions with punishments
5. computerized experiments
  - Tools for creating experiments
  - ZTREE

- OTREE & Django/Python framework

6. Why Industrial Organization experiments?

7. IO and lab experiments

- Forward markets and competition
- Forward markets and forward premia
- Regulation and self-regulation

#### Part 2 (Field experiments):

01. Reciprocity (gift-exchange).
02. Incentives and economic behavior.
03. Social preferences: universal or responding to circumstances?
04. Formation of social preferences during childhood and adolescence.
05. Self-control, status quo bias and deadlines.
06. Commitment devices.
07. Determinants of time discounting.
08. Discrimination: preference-based or statistical?
09. Discrimination in social psychology.
10. Peer effects.
11. The role of prices in social programs.

#### **Requirements and grading**

Grades will be based on student's performance in two problem sets handed to the students during the course and a term paper. There will be neither midterm nor final exams. The grading scheme is as follows:

Problem Set 1	10%
Problem Set 2	10%
Term paper	80%

#### **Reading list**

##### Part 1 (Lab experiments)

1. Introduction and Methodology

- ✓ \*Holt, chapter 1.
- ✓ Hertwig, Ralph and Andreas Ortmann. "Experimental Practices in Economics: A Methodological Challenge for Psychologists?" Behavioral and Brain Sciences, 2001, 24(3), pp. 383-402.
- ✓ DellaVigna, S. 2009. "Psychology and economics: Evidence from the field." Journal of Economic Literature 47:315–372.
- ✓ Card, D., S. DellaVigna, a U. Malmendier. 2011. The role of theory in field experiments. National Bureau of Economic Research.
- ✓ Harrison, G. W, a J. A List. 2004. „Field experiments“. Journal of Economic Literature 42 (4): 1009–1055.
- ✓ List, J. A., a I. Rasul. 2011. „Field experiments in labor economics“. In Ashenfelter and Card: Handbook of labor economics 4: 103–228.
- ✓ List, J. A. 2011. „Why economists should conduct field experiments and 14 tips for pulling one off“. The Journal of Economic Perspectives 25 (3): 3–15.

2. Dictator, Ultimatum Games and Other-regarding preferences

- ✓ \*Holt, chapter 12
- ✓ Bornstein, Gary and I. Yaniv. "Individual and Group Behavior in the Ultimatum Game: Are Groups More "Rational" Players?" *Experimental Economics*, 1998, 1, pp. 101-108.
- ✓ \*Cherry, Todd, Peter Frykblom and Jason Shogren. "Hardnose the Dictator." *American Economic Review*, 2002, 92(4), pp. 1218-1221.
- ✓ \*Forsythe, Robert, Joel Horowitz, N.S. Savin and Martin Sefton. "Fairness in Simple Bargaining Experiments." *Games and Economic Behavior*, 1994, 6(3), pp. 347-369.
- ✓ \*Guth, Werner, R. Schmittberger and B. Schwartz. "An Experimental Analysis of Ultimatum Bargaining." *Journal of Games and Economic Behavior*, 1982, 3(4), pp. 367-388.
- ✓ \*Hoffman, E., K. McCabe., K. Shachat, and V. Smith. "Preferences, Property Rights, and Anonymity in Bargaining Games." *Games and Economic Behavior*, 1994, 7, pp. 346-380.
- ✓ \*List, John. "On the Interpretation of Giving in Dictator Games." *Journal of Political Economy*, 2007, 115(3), pp. 482-493.
- ✓ \*Slonim, Robert and Alvin E. Roth. "Learning in High Stakes Ultimatum Games: An Experiment in the Slovak Republic." *Econometrica*, 1988, 66(3), pp. 569-596.
- ✓ \*Bolton, Gary E. and Axel Ockenfels. "ERC: A Theory of Equity, Reciprocity and Competition." *American Economic Review*, 2000, 90(1), pp. 166-193.
- ✓ \*Charness, Gary and Matthew Rabin. "Understanding Social Preferences with Simple Tests." *Quarterly Journal of Economics*, 2002, 117(3), pp. 817-869.
- ✓ Falk, Armin and Urs Fischbacher. "A Theory of Reciprocity." *Games and Economic Behavior*, 2006, 54(2), pp. 293-315.
- ✓ \*Fehr, Ernst and Klaus Schmidt. "A Theory of Fairness, Competition, and Cooperation." *Quarterly Journal of Economics*, 1999, 114(3), pp. 817-868.

### 3. Trust, Reciprocity and Principal-Agent Games

- ✓ \*Holt, chapter 13.
- ✓ \*Berg, Joyce, John Dickhaut and Kevin McCabe. "Trust, Reciprocity, and Social History." *Games and Economic Behavior*, 1995, 10(1), pp. 122-142.
- ✓ Bohnet, Iris, Bruno S. Frey and Steffen Huck. "More Order with Less Law: On Contract Enforcement, Trust, and Crowding." *American Political Science Review*, 2001, 95(1), pp. 131-144.
- ✓ Cox, James C. "How to Identify Trust and Reciprocity." *Games and Economic Behavior*, 2004, 46(2), pp. 260-281.
- ✓ \*Fehr, Ernst, Simon Gächter and Georg Kirchsteiger. "Reciprocity as a Contract Enforcement Device: Experimental Evidence." *Econometrica*, 1997, 65(4), pp. 833-860.
- ✓ \*Fehr, Ernst, Georg Kirchsteiger, and Arno Riedl. "Does Fairness Prevent Market Clearing? An Experimental Investigation." *Quarterly Journal of Economics*, 1993, 108(2), pp. 437-459.

### 4. Cooperation

- ✓ \*Holt, chapter 3.1-2., chapters 14 and 15.
- ✓ Andreoni, James. "An Experimental Test of the Public Goods Crowding-Out Hypothesis." *American Economic Review*, 1993, 83(5), pp. 1317-1327.
- ✓ Andreoni, James. "Cooperation in Public Goods Experiments: Kindness or Confusion?" *American Economic Review*, 1995a, 85(4), pp. 891-904.
- ✓ \*Goeree, Jacob K., Charles A. Holt and S. Laury. "Private Costs and Public Benefits: Unraveling the Effects of Altruism and Noisy Behavior." *Journal of Public Economics*, 2002, 83(2), pp. 257-278.
- ✓ \*Isaac, R. Mark and James Walker. "Group Size Effects in Public Goods Provision: The Voluntary Contributions Mechanism." *Quarterly Journal of Economics*, 1988a, 103(1), pp. 179-199.
- ✓ Isaac, R. Mark and James Walker. "Communication and Free-Riding Behavior: The Voluntary Contribution Mechanism." *Economic Inquiry*, 1988b, 26, pp. 585-608.
- ✓ \*Isaac, R. Mark, James Walker and Arlington Williams. "Group Size and the Voluntary Provision of Public Goods: Experimental Evidence Utilizing Large Groups." *Journal of Public Economics*, 1994, 54(1), pp. 1-36.
- ✓ Palfrey, Thomas and Howard Rosenthal. "Testing for Effects of Cheap Talk in a Public Goods Game with Private Information." *Games and Economic Behavior*, 1991, 3(2), pp. 183-220.

- ✓ Palfrey, Thomas and Jeffrey Prisbrey. "Altruism, Reputation, and Noise in Linear Public Goods Experiments." *Journal of Public Economics*, 1996,61(3), pp. 409-427.
- ✓ Palfrey, Thomas and Jeffrey Prisbrey. "Anomalous Behavior in Public Goods Experiments: How Much and Why?" *American Economic Review*, 1997, 87(5), pp. 829-846.
- ✓ \*Fehr, Ernst and Simon Gächter. "Cooperation and Punishment in Public Goods Experiments." *American Economic Review*, 2000, 90(4), pp. 980-994.
- ✓ \*Gureck, Ozgur, Bernd Irlenbusch and Bettina Rockenbach. "The Competitive Advantage of Sanctioning Institutions." *Science*, 2006, 312, pp. 108-111.
- ✓ \*Kosfeld, Michael, Akira Okada and Arno Riedl. "Institution Formation in Public Goods Games." *American Economic Review*, 2009, 99(4), pp. 1335-1355.

#### 5. Computerized experiments

- ✓ \*Chen, D.I., Schonger, M., Wickens, C. 2015. OTree - An Open-Source Platform for Laboratory, Online, and Field Experiments. Available on: <http://www.otree.org/oTree.pdf>
- ✓ \*Hourieh, A. 2008. Learning Website Development with Django
- ✓ \*OTREE documentation. Available on <http://otree.readthedocs.org/en/latest/>
- ✓ Python 3.4.3 documentation. Available on <https://docs.python.org/3/>
- ✓ Ztree documentation and support. Available on <http://www.ztree.uzh.ch/support.html>

#### 6. Why Industrial Organization experiments?

- ✓ \*Friedman, 2004. Chap 2, 3,4.
- ✓ \*Holt, Chap.2
- ✓ \*Brandts, J., Pezanis-Christou, P., Schram, A. 2008. Competition with forward contracts: a laboratory analysis motivated by electricity market design. *The Economic Journal*, 118(525), 192-214.
- ✓ \*Van Koten, S., Ortmann, A., and Babický, V. 2013, Fairness in Risky Environments: Theory and Evidence. *GAMES* 4, 208-242.
- ✓ \*Van Koten, S., Ortmann, A. 2013. Structural versus behavioral remedies in the deregulation of electricity markets: An experimental investigation motivated by policy concerns. *European Economic Review*, 64, 256-265.

#### 7. IO and lab experiments

- ✓ Allaz, B., & Vila, J. L. (1993). Cournot competition, forward markets and efficiency. *Journal of Economic theory*, 59(1), 1-16.
- ✓ \*Bessembinder, H., & Lemmon, M. L. 2002. Equilibrium pricing and optimal hedging in electricity forward markets. *the Journal of Finance*, 57(3), 1347-1382.
- ✓ \*Brandts, J., Pezanis-Christou, P., Schram, A. 2008. Competition with forward contracts: a laboratory analysis motivated by electricity market design. *The Economic Journal*, 118(525), 192-214.
- ✓ Brandts, J., Reynolds, S. S., & Schram, A. 2013. Pivotal Suppliers and Market Power in Experimental Supply Function Competition. *The Economic Journal*.
- ✓ \*DeMarzo, P. M., Fishman, M. J., Hagerty, K. M. 2005. Self-regulation and government oversight. *The Review of Economic Studies*, 72(3), 687-706.
- ✓ \*Hourieh, A. 2008. Learning Website Development with Django.
- ✓ \*OTREE documentation. Available on <http://otree.readthedocs.org/en/latest/>
- ✓ Python 3.4.3 documentation. Available on <https://docs.python.org/3/>
- ✓ \*Rassenti, S. J., Smith, V. L., & Wilson, B. J. 2001. Using experiments to inform the privatization/deregulation movement in electricity. *Cato J.*, 21, 515.
- ✓ \*Rassenti, S. J., Smith, V. L., & Wilson, B. J. 2003. Controlling market power and price spikes in electricity networks: Demand-side bidding. *Proceedings of the National Academy of Sciences*, 100(5), 2998-3003.
- ✓ \*Van Koten, S., Ortmann, A. 2013. Structural versus behavioral remedies in the deregulation of electricity markets: An experimental investigation motivated by policy concerns. *European Economic Review*, 64, 256-265.



- ✓ \*Van Koten, S. Ortmann, A. 2013. Self-regulating organizations under the shadow of governmental oversight: An experimental investigation (with Andreas Ortmann). Australian School of Business Research Paper No. 2013 ECON 13.

## Part 2 (Field experiments)

### 1. Reciprocity (gift-exchange)

- ✓ Charness, G., and M. Rabin. 2002. "Understanding Social Preferences with Simple Tests." *Quarterly Journal of Economics* 117:817–869.
- ✓ Fehr, Ernst, Georg Kirchsteiger, and Arno Riedl. 1993. "Does Fairness Prevent Market Clearing? An Experimental Investigation." *The Quarterly Journal of Economics* 108:437-459.
- ✓ \*Fehr, E., U. Fischbacher, and E. Tougareva. n.d. "Do high stakes and competition undermine fairness? Evidence from Russia." Unpublished paper.
- ✓ \*Gneezy, U., and J. A List. 2006. "Putting behavioral economics to work: Testing for gift exchange in labor markets using field experiments." *Econometrica* 1365–1384.
- ✓ \*Falk, A. 2007. "Gift exchange in the field." *Econometrica* 75:1501–1511.
- ✓ \*Kube, S., M. A Maréchal, and C. Puppe. 2006. "Putting Reciprocity to Work—Positive versus Negative Responses in the Field." University of St. Gallen Department of Economics working paper series.
- ✓ Kube, S., M. A Maréchal, and C. Puppe. 2011. "The currency of reciprocity— Gift-exchange in the workplace." *American Economic Review*, 102(2012), 1644 - 1662.
- ✓ \*Karlán, D., and J. A List. 2007. "Does price matter in charitable giving? Evidence from a large-scale natural field experiment." *The American Economic Review* 97:1774–1793.
- ✓ Gneezy, A., U. Gneezy, L. D Nelson, and A. Brown. 2010. "Shared Social Responsibility: A Field Experiment in Pay-What-You-Want Pricing and Charitable Giving." *Science* 329:325.

### 2. Incentives and economic behavior

- ✓ \*Gneezy, U., and A. Rustichini. 2000. "A Fine is a Price." *The Journal of Legal Studies* 29:1–17.
- ✓ \*Bandiera, O., I. Barankay, and I. Rasul. 2005. "Social Preferences and the Response to Incentives: Evidence from Personnel Data\*." *The Quarterly Journal of Economics* 120:917–962.
- ✓ \*Glewwe, P., N. Ilias, and M. Kremer. 2010. "Teacher incentives." *American Economic Journal: Applied Economics* 2:205–227.
- ✓ Duflo, E., and R. Hanna. 2005. "Monitoring works: getting teachers to come to school." NBER Working Paper.
- ✓ Bandiera, Oriana, Iwan Barankay, and Imran Rasul. "Social Connections and Incentives in the Workplace: Evidence from Personnel Data." *Econometrica* 77, no. 4 (July 1, 2009): 1047–1094.
- ✓ Bandiera, Oriana, Iwan Barankay, and Imran Rasul. (2011): Field experiments in firms. *Journal of economic perspectives*, 25(3): 63-82.

### 3. Social preferences: universal or responding to circumstances?

- ✓ \*Fehr, Ernst, and Simon Gächter. 2002. "Altruistic punishment in humans." *Nature* 415:137-140.
- ✓ E. Fehr and K. Hoff. 2011 "Tastes, castes, and culture: The influence of society on preferences" *Economic Journal*. 121:396-412
- ✓ \*Herrmann, B., C. Thoni, and S. Gächter. 2008. "Antisocial punishment across societies." *Science* 319:1362.
- ✓ \*Henrich, J. et al. 2001. "In search of homo economicus: behavioral experiments in 15 small-scale societies." *American Economic Review* 91:73–78.
- ✓ Henrich, J. et al. 2006. "Costly punishment across human societies." *Science* 312:1767.
- ✓ \*Bauer, Michal, Alessandra Cassar, and J. Chytilová. 2010. "War's enduring effects on egalitarian motivations and in-group biases." mimeo.
- ✓ Benjamin, D.J., Choi, J.J. and Strickland, A.J. (2010). Social identity and preferences. *American Economic Review*, vol. 100(4), pp. 1913-1928.

- ✓ Gneezy, A., and D. M.T Fessler. "Combat and cooperation: War Increases Prosocial Punishments and Rewards." *Proceedings of the Royal Society B: Biological Sciences* (2011).
  - ✓ Hoff, K., Fehr, E., and Kshetramade, M. (2011). "Caste and punishment: The legacy of caste culture in norm enforcement", *Economic Journal*.
  - ✓ LeBoeuf, R. A., Shafir, E., and Bayuk, J. B. (2010). "The conflicting choices of alternating selves", *Organizational Behavior and Human Decision Processes*, vol. 111(1), pp. 48-61.
  - ✓ M. Voors et al. 2012. "Violent conflict and behavior: a field experiment in Burundi," *American Economic Review* (tba).
4. Roots of social preferences: developmental psychology
- ✓ Ingvild Almås et al., "Fairness and the Development of Inequality Acceptance," *Science* 328, no. 5982 (May 28, 2010): 1176 -1178. (tba)
  - ✓ \*Silk, J. B et al. 2005. "Chimpanzees are indifferent to the welfare of unrelated group members." *Nature* 437:1357–1359.
  - ✓ \*Sutter, M. 2007. "Outcomes versus intentions: On the nature of fair behavior and its development with age." *Journal of Economic Psychology* 28:69–78.
  - ✓ Sutter, M., and M. G Kocher. 2007. "Trust and trustworthiness across different age groups." *Games and Economic Behavior* 59:364–382.
  - ✓ \*Fehr, E., H. Bernhard, and B. Rockenbach. 2008. "Egalitarianism in young children." *Nature* 454:1079–1083.
  - ✓ E. Fehr, D. Rützler, and M. Sutter. 2011. "The development of egalitarianism, altruism, spite and parochialism in childhood and adolescence," Mimeo.
  - ✓ \*Bauer, M., J. Chytilová, B. Pertold-Gebicka. 2011. The effect of parental background on other-regarding preferences in children. Mimeo.
  - ✓ Benenson, Joyce F., Joanna Pascoe, a Nicola Radmore. 2007. "Children's altruistic behavior in the dictator game". *Evolution and Human Behavior* 28 (3): 168–175.
  - ✓ Matthias Sutter, Martin Kocher, Daniela Rützler and Stefan Trautmann: Impatience and uncertainty: Experimental decisions predict adolescents' field behavior. *American Economic Review* 103 (2013): 510-531.
5. Self-control, status quo bias and deadlines
- ✓ \*Ariely, D., and K. Wertenbroch. 2002. "Procrastination, deadlines, and performance: Self-control by precommitment." *Psychological Science* 219–224.
  - ✓ \*Della Vigna, S., and U. Malmendier. 2006. "Paying not to go to the gym." *American Economic Review* 96:694–719.
  - ✓ \*Thaler, R. H, and S. Benartzi. 2004. "Save More Tomorrow™: using behavioral economics to increase employee saving." *Journal of Political Economy* 112:164–187.
  - ✓ Madrian, B. C, and D. F Shea. 2001. "The Power of Suggestion: Inertia in 401 (k) Participation and Savings Behavior\*." *Quarterly Journal of Economics* 116:1149–1187.
6. Commitment devices
- ✓ Bryan, Gharad, Dean Karlan, and Scott Nelson. n.d. "Commitment Devices." <http://karlan.yale.edu/p/CommitmentDevices-AnnualReview-v32.pdf> (Accessed November 14, 2009).
  - ✓ \*Ashraf, N., D. Karlan, and W. Yin. 2006. "Tying Odysseus to the Mast: Evidence from a Commitment Savings Product in the Philippines." *Quarterly Journal of Economics* 121:635–672.
  - ✓ \*Duflo, E., M. Kremer, and J. Robinson. 2009. "Nudging Farmers to Utilize Fertilizer: Theory and Experimental Evidence from Kenya." CEPR Discussion Papers.
  - ✓ Gine, X., D. Karlan, and J. Zinman. 2009. "Put your Money where your butt is." *Research Working papers* 1:1–34.
  - ✓ \*Bauer, M., J. Chytilová, and J. Morduch. Forthcoming. "Behavioral foundations of microcredit: Experimental and survey evidence from rural India." *American Economic Review*.
7. Time discounting
- ✓ Augenblick, N., Niederle, M., & Sprenger, C. (2015). Working over time: Dynamic Inconsistency in real effort tasks. *Quarterly Journal of Economics*, forthcoming. doi:10.1016/j.jfluchem.2010.02.012

- ✓ \*Harrison, G. W., M. I. Lau, and M. B. Williams. 2002. "Estimating individual discount rates in Denmark: A field experiment." *American Economic Review* 1606–1617.
  - ✓ \*Sunde, U., T. Dohmen, A. Falk, and D. Huffman. 2010. "Are Risk Aversion and Impatience Related to Cognitive Ability?." *American Economic Review* 100:1238–1260.
  - ✓ \*Bauer, M., and J. Chytilová. 2010. "The impact of education on subjective discount rate in ugandan villages." *Economic Development and Cultural Change* 58:643–669.
  - ✓ Bauer, M., and J. Chytilová. 2009. "Women, children and patience: experimental evidence from Indian villages." IZA Discussion paper n. 4241.
  - ✓ Mischel, W., Y. Shoda, and M. L. Rodriguez. 1989. "Delay of gratification in children.." *Science* 244:933–938.
8. Discrimination: preference-based or statistical?
- ✓ \*Bartos, V., Bauer, M., Chytilova, J. and Matejka F. 2012. Attention discrimination: Theory and Natural field experiments. Mimeo.
  - ✓ Bauer, Fiala and Levely (work in progress): Trust and re-integration of former child soldiers in Northern Uganda.
  - ✓ \*Fershtman, C., and U. Gneezy. 2001. "Discrimination in a Segmented Society: An Experimental Approach\*." *Quarterly Journal of Economics* 116:351–377.
  - ✓ \*Bertrand, M., and S. Mullainathan. 2004. "Are Emily and Greg more employable than Lakisha and Jamal? A field experiment on labor market discrimination." *American economic review* 94:991–1013.
  - ✓ Gneezy, U., J. List, and M. K. Price. Toward an Understanding of Why People Discriminate: Evidence from a Series of Natural Field Experiments. National Bureau of Economic Research.
  - ✓ Ahmed, A. M., L. Andersson, and M. Hammarstedt. n.d. "Can discrimination in the housing market be reduced by increasing the information about the applicants?.".
  - ✓ Ahmed, A. M., and M. Hammarstedt. 2008. "Discrimination in the rental housing market: a field experiment on the internet." *Journal of Urban Economics* 64:362–372.
  - ✓ Doleac, J. L., L. C.D Stein, and L. E Building. 2010. "The Visible Hand: Race and Online Market Outcomes." Unpublished manuscript.
9. Discrimination in social psychology
- ✓ \*Bertrand, M., D. Chugh, and S. Mullainathan. 2005. "Implicit discrimination." *American Economic Review* 95:94–98.
  - ✓ Beaman, L., R. Chattopadhyay, E. Duflo, R. Pande, and P. Topalova. 2008. "Powerful Women: Does Exposure Reduce Prejudice?." *Quarterly Journal of Economics*, forthcoming.
  - ✓ \*Hoff, Karla, and Priyanka Pandey. 2006. "Discrimination, Social Identity, and Durable Inequalities." *The American Economic Review* 96:206-211.
  - ✓ Steele, C. M., and J. Aronson. 1995. "Stereotype threat and the intellectual test performance of African Americans." *Journal of personality and social psychology* 69:797–811.
10. Peer effects
- ✓ Gächter, S., Nosenzo, D., & Sefton, M. (2013). Peer Effects in Pro-Social Behavior: Social Norms or Social Preferences? *Journal of the European Economic Association*, 11(3), 548–573. doi:10.1111/jeea.12015
  - ✓ Bursztyn, L., Ederer, F., Ferman, B., & Yuchtman, N. (2014). Understanding Mechanisms Underlying Peer Effects : Evidence from a Field Experiment on Financial. *Econometrica*, 82(4), 1273–1301.
  - ✓ Bauer, M., Cahlikova, J., Chytilova, J. and Zelinsky, T. (2015). Peers and contagion of ethnic hostility. Working paper
11. The role of prices in social programs
- ✓ \*Ashraf, N., J. N. Berry, and J. M. Shapiro. 2007. "Can higher prices stimulate product use? Evidence from a field experiment in Zambia." NBER Working Paper.
  - ✓ \*Cohen, J., and P. Dupas. 2010. "Free Distribution or Cost-Sharing? Evidence from a Randomized Malaria Prevention Experiment\*." *Quarterly Journal of Economics* 125:1–45.

- ✓ \*Hoffmann, V. 2008. "Psychology, gender, and the intrahousehold allocation of free and purchased mosquito nets." University of Maryland Department of Agricultural and Resource Economics Working Paper 08–15.

## TIME SERIES ANALYSIS

**Lecturer:**

Michal Pakoš

(Michal.Pakos@cerge-ei.cz; office 327, phone 121)

**Teaching assistant:**

Mykola Babiak

(mykola.babiak@cerge-ei.cz)

**Office hours:**

TBA

### Course information

Time series consist of values of a variable recorded in an order over a period of time. Such data arise in just about every area of economics and finance. What makes time series data special is the presence of dependence between observations in a series, and the fact that usually only one observation is made at any given point in time. This means that standard statistical methods are not appropriate, and special methods for statistical analysis are needed.

### Course outline

Difference Equations and Lag Operators  
Projection Theorem  
Stationary ARMA Processes  
Wold Decomposition Theorem  
Forecasting  
Maximum Likelihood Estimation (MLE)  
Spectral Analysis  
Asymptotic Distribution Theory  
Vector Autoregressions (VAR)  
Kalman and Wonham Filters  
Generalized Method of Moments (GMM)  
Nonstationary Time Series (deterministic and stochastic time trends, co-integration)

### Requirements and grading

Grades based on student's performance in midterm exam and final exam as well as regular homeworks. The grading schemes is

- Midterm exam 40%
- Final exam 40%

– Homeworks 20%

### Reading list

- ✓ James D. Hamilton, Time Series Analysis, Princeton University Press.
- ✓ Peter J. Brockwell and Richard A. Davis, Time Series: Theory and Methods, Springer Series in Statistics, 2<sup>nd</sup> Edition.
- ✓ Thomas J. Sargent, Macroeconomic Theory, 2<sup>nd</sup> Edition, Emerald Group Publishing Limited.

## COMBINED SKILLS I

### Lecturers:

Andrea Downing

(Andrea.Downing@cerge-ei.cz; office 317, phone 254)

Deborah Nováková

(deborah.novakova@cerge-ei.cz; office 318, phone 197)

Paul Whitaker

(Paul.Whitaker@cerge-ei.cz; office 315, phone 259)

### Office hours:

TBA

### Course information

Combined Skills I combines development of oral presentation skills with production of a research-related written paper, with preparation for writing MA or DPW papers in mind (though of course your project may change before then). Projects are usually an initial research proposal or an extension of the position paper from AW2, though other options are possible. Each individual project will be agreed between the student and the instructor early in the course.

### Requirements & Grading

CV and Bio 10%

Presentation Skills 45%

Written Paper 45%

100% attendance is mandatory. Any necessary absences must be discussed with your instructor, preferably in advance, and any work missed must be made up. Missing more than two classes will impact your grade for the course. Please note that a 'class' means 8.30-10.00 or 10.30-12.00. Missing 8.30-12.00 once equals missing TWO classes. We do not accept late submissions of any task, unless the student has documented an official illness or other issue with the SAO. Any late submission will be graded 0 automatically.

When relevant, updates that supersede this hardcopy can be found on the internal pages of the website at: [https://iweb.cerge-ei.cz/phd/prog\\_details/coursebook/](https://iweb.cerge-ei.cz/phd/prog_details/coursebook/)

### **III. PROFESSORS AND LECTURERS TEACHING IN THE SPRING SEMESTER 2016**

#### **PhDr. Michal Bauer, Ph.D.**

Assistant Professor

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Michal Bauer is an Assistant Professor at CERGE-EI (under US permanent charter) since September 2010 and a Researcher at the Economics Institute of the Academy of Sciences of the Czech Republic since September 2011. His other affiliations include an Assistant Professor at the Institute of Economic Studies, Charles University in Prague (where he earned his Ph.D. degree in 2009) and IZA Research Fellow. He was a Fulbright visiting scholar at New York University in 2007-8 and a visiting researcher at UC Berkeley in 2015.

Research orientation:

His research interests are in the areas of development microeconomics, experimental economics, and behavioral economics. His recent work focuses on microfinance, conflict and social preferences, discrimination and formation of preferences. He has conducted field experiments on related topics in Uganda, India, the Republic of Georgia, Sierra Leone and the Czech Republic.

#### **Andrea Downing, Ph.D.**

Academic Skills Center Lecturer

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Andrea Downing is teaching at CERGE-EI since September 2012. Received her Ph.D. in Economic and Social History from the University of Liverpool, UK in 1998 and M.A. in Research Methods in the Social Sciences from the University of Liverpool, UK in 1993. She worked as a Lecturer at the Metropolitan University in Prague from 2010 to 2012. She was also working as a Teacher Trainer at the Metropolitan University in Prague from 2010 to 2011, where she designed and delivered pedagogic training to aspiring and in-service Czech teachers of English. From September 2004 to June 2005 she was an Associate Professor and a Chair of Foundation Studies at Sur University College in Oman. Her research interests include multiple intelligences and learner autonomy and observing the observer in teaching development.

Research Orientation:

Multiple intelligences and learner autonomy and observing the observer in teaching development.

#### **prof. RNDr. Jan Hanousek, Ph.D.**

Citigroup Endowment Professor with Tenure

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Jan Hanousek is the Citigroup Endowment Professor with tenure at CERGE-EI (under US permanent charter) since Fall 2003. He is also a Full Professor at CERGE, Charles University since November 2002 and a Senior Researcher at the Economics Institute of the Academy of Sciences (EI) since 2003. Graduated in Probability and Statistics from Charles University in 1987, receiving a CSc. (Ph.D.) in Statistics from Charles University in 1990. From 1992–1996 Assistant Professor, from 1996–2002 Docent (Associate Professor) at CERGE, Charles University. From 1992–2003 a Researcher at EI. He served as the Director of CERGE and EI between July 1999–June 2003. Citigroup Professor of Financial Markets at CERGE-EI (under US permanent charter) Fall 2001–Spring 2003. Between 1999–2010 he served as a member of the Executive and Supervisory Committee of CERGE-EI. In 1997 and 2004 Visiting Professor, William Davidson Institute, University of Michigan Business School. In 1996 Research Fellow, City University of New York. 1994–1995 Visiting Post-doctoral Fellow at the Department of Economics, University of Pennsylvania.

Research Orientation:

Applied econometrics, applied finance (corporate finance, financial econometrics), banking and finance, econometrics, public finance, and statistics.

## **Byeongju Jeong, Ph.D.**

Mellon Endowment Associate Professor with Tenure

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Byeongju Jeong is the Mellon Endowment Associate Professor with tenure at CERGE-EI (under US permanent charter) and a member of the Executive and Supervisory Committee of CERGE-EI since 2003. He is also an Assistant Professor at CERGE, Charles University and a Researcher at the Economics Institute of the Academy of Sciences of the Czech Republic (EI) since 1997. He served as the Deputy Director for Graduate Studies at CERGE and EI from 2010 to 2012. Graduated from the University of Texas with a B.A. degree in Economics in 1991. Received a M.A. in Economics from the University of Minnesota in 1994, and a Ph.D. in Economics from the University of Minnesota in 1996. Lecturer at Pennsylvania State University from 1996 to 1997. Visiting professor at Universitat Pompeu Fabra in Barcelona from 2003 to 2004.

Research orientation:

Growth and development, macro labor, international macro.

## **Fabio Michelucci, Ph.D.**

Associate Professor with Tenure

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Fabio Michelucci has been an Associate Professor with tenure at CERGE-EI (under US permanent charter) and at CERGE, Charles University since January 2016. He has also been a Researcher at the Economics Institute of the Czech Academy of Sciences since September 2009.

He earned his B.A. degree in Economics, summa cum laude (2000), from the University of Florence, Italy; M.Sc. degree in Economics (2001) from Universitat Pompeu Fabra, Spain; Ph.D. degree in Economics (2007) from University College London, United Kingdom.

From 2002 until 2006 he worked as a Teaching Assistant at University College London, United Kingdom. In 2006 he also worked as a Researcher (Assegnista di Ricerca) at Bocconi University, Italy. From 2007 to March 2009 he was a Post-doctoral Scholar at the Division of the Humanities and

Social Sciences, California Institute of Technology, USA. Finally, from September 2009 to December 2015 he was Assistant Professor at CERGE-EI.

His research has appeared (or is forthcoming) in international journals such as *The Economic Journal*, *Games and Economic Behavior*, *Journal of Economic Behavior and Organization*, *Economics Letters*, and *Review of Economic Design*.

Research orientation:

economic theory, industrial organization, mechanism design, auction theory, and experimental economics.

### **Nikolas Mittag, Ph.D.**

Assistant Professor

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Nikolas Mittag has been an Assistant Professor at CERGE-EI (under U.S. permanent charter) as of September 2013 and an Assistant Professor at CERGE, Charles University, since July 2013. He has also worked as a Researcher at the Economics Institute of the Academy of Sciences of the Czech Republic from September 2013. He received his B.A. degree in Philosophy & Economics from the University of Bayreuth (2007) and his Ph.D. in Public Policy Studies from the Harris School of Public Policy at the University of Chicago. He was a fellow (Program on Political Institutions) at the Harris School of Public Policy in 2009 and received a dissertation fellowship from the U.S. Census Bureau, USA (2011-2013).

Research orientation:

Applied econometrics, microeconomics, public economics, program evaluation.

### **doc. Ing. Daniel Münich, Ph.D.**

Associate Professor

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Daniel Münich is an Associate Professor at CERGE-EI (under U.S. permanent charter). He is a Docent (Associate Professor) at CERGE, Charles University, since 2006, and a Researcher at the Economics Institute of the Academy of Sciences of the Czech Republic (EI) since 1998. Since September 2015 he has served as Deputy Director for Research of CERGE and EI. Received his Ing. degree in Electrical Engineering in 1991 from the Czech Technical University in Prague, and Ph.D. in Economics in 1998 from CERGE, Charles University. During 1997–1998 a Visiting Scholar at the William Davidson Institute at the University of Michigan Business School and during 1994–1995 at a study stay at the University of Pittsburgh. At CERGE-EI (under US permanent charter) he was Altria Group Associate Professor (Spring 2006 – Spring 2008). Deputy Director for Development and Public Relations (2003–2006) and Deputy Director for Graduate Studies (1999–2002) at CERGE and EI. Research Affiliate of CEPR in London. He served as an advisor to Ministers of Education, Youth and Sport, and of Finances of the Czech Republic (in 2006 and during 1997–1998), an external advisor of the minister of finance of the Czech Republic (1997, 2002–2004), a steering committee member under the auspices of the Czech vice-minister for economy to supervise the national Strategy for Economic Growth (in 2005). Member of an expert team preparing reform of the Czech tertiary



education system (2007–2008). He was a senior advisor to the European Network of Economists of Education (EENEE) (2004–2007), a member of the executive board of the Czech Economic Society (during 2003–2009), a member of the Board of the Sociological Institute of the Czech Academy of Sciences (during 2006–2010). He is a member of the Board of EI (since 1997), a National SYSDEM Correspondent for the EU commission (since 2005), a chair of the governmental Advisory Committee for Social and Human Sciences and a member of Advisory Committee for Evaluation of R&D of the Board for R&D of the Czech government (since 2008), a member of the National Economic Board of the Government (since 2010) and a member of the European Association of Labour Economists (since 2006).

Research Orientation:

Labor economics (empirical issues of unemployment, labor supply and policies, human capital, welfare schemes), economics of education and schooling (public vs. private schools, quality of education, efficiency and equity, selectivity), bibliometric analysis.

### **Deborah Nováková, M.A.**

Head of Academic Skills Center

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Deborah Nováková has been teaching at CERGE-EI since August 2012. She received her M.A. in TEFL/TESL from the University of Birmingham, UK in 2007. From October 2007 to October 2010 she was working as an Instructor, course coordinator, curriculum developer and a professional development facilitator at Maastricht University Language Centre in Netherlands. She was also at Maastricht University from 2001-2003. From 2003 to 2007 she was working as an Instructor, curriculum developer and an editor at the Southern Alberta Institute of Technology in Calgary, Canada, where she worked on both domestic and international projects.

Research orientation:

Curriculum design, teacher training and professional development, successful intercultural communication in international contexts, student-centred learning approaches and methods, successful team-building in classroom and teaching in team contexts.

### **Michal Pakoš, Ph.D.**

Assistant Professor

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Michal Pakoš is an Assistant Professor at CERGE-EI (under US permanent charter) and at CERGE, Charles University since September 2011 and a Researcher at the Economics Institute of the Academy of Sciences of the Czech Republic since August 2009. Earned his MA. degree in Economics (2000/Hons) from the Central European University, Hungary and his Ph.D. degree in Finance (2005) from the Booth School of Business at the University of Chicago, USA.

Research orientation:

Empirical macroeconomics, asset pricing.

**Mariola Pytlíková, Ph.D.**

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Mariola Pytlíková is a senior researcher at the VSB Technical University Ostrava. Previously she worked as a senior researcher at the Danish Institute of Governmental Research (KORA), and as an assistant professor and postdoctoral researcher at ASB, Aarhus University. She received her PhD in Economics from ASB, Aarhus University in 2006. In the past she has held visiting stays at Princeton University, University of Illinois at Chicago, University of Modena and Reggio Emilia and Universitat Pompeu Fabra in Barcelona. She is a research fellow at CReAM, IZA and CELSI.

Research orientation:

Mariola's research interests are in the field of labour economics and industrial relations, in particular topics dealing with causes and consequences of international migration and ethnic labor diversity, wage structures and labour market dynamics, gender differentials on the labour market, and income inequality. She has published in outlets such as the Economic Journal, the European Economic Review, Journal of Population Economics, the Economics of Transition and Labour.

**prof. Avner Shaked, Ph.D.**

Visiting Professor, Bonn University

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Avner Shaked is a Visiting Professor at CERGE-EI since 1998. Since May 2000 member of the Executive and Supervisory Committee of CERGE-EI. State Street Distinguished Visiting Professor at CERGE-EI since Fall 2001 to Spring 2009. Earned a B.Sc. from Hebrew University, Jerusalem in Mathematics and Physics in 1964. Holds a M.Sc. (1965) from Hebrew University, Jerusalem in Mathematical Logic. In 1972 earned his Ph.D. degree in Economics from Hebrew University, Jerusalem. Since 1989 Professor of Economic Theory, Bonn University, Germany. Since February 2009 a Professor emeritus in Bonn (retired). 1982–1993 member of the Editorial Board of the Review of Economic Studies; 1982–1987 Secretary Organizer of the Workshop in Theoretical Economics, STICERD, London School of Economics; 1983–1989 London Coordinator of the European Doctoral Program; 1988–1991 Associate Editor of The Quarterly Journal of Economics; 1993–1995 Associate Editor of the Journal of Economic Theory; since 1992 a Fellow of Econometric Society.

Research orientation:

Bounded rationality, learning theory, evolutionary theory, experimental game theory, theoretical industrial organization, bargaining theory.

**doc. Silvester van Koten, Ph.D.**

Post-Doctoral Fellow

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Silvester van Koten is a Jean-Monet Fellow at the Florence School of Regulation and a Post-Doc Fellow at CERGE-EI in Prague. He is a researcher with a special interest in the economics of energy markets, renewables, and regulation. His present research appraises the effectiveness of forward markets to alleviate market power using economics experiments. In his previous research, he analyzed the effects of incomplete unbundling on competition. Apart from his intellectual passion, Economics, Silvester van Koten has interests in a broad range of fields, such as Public Speaking, Psychology, the Philosophy of Science, and Mathematics. He has been teaching on the CERGE-EI's MA in Applied Economics program since 2013.

Research Orientation:  
Energy markets, regulation, and economics experiments.

### **Paul Whitaker, M.A.**

Academic Skills Center Lecturer

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Paul Whitaker has been teaching at CERGE-EI since August 2014. He earned his Master's from the University of Nottingham, England in 2000. Before coming to CERGE-EI, Paul taught at the Higher Colleges of Technology in the UAE and the School of Business Administration in Karviná, Czech Republic. He also worked for many years as a teacher trainer and business skills trainer focusing on presentation and communication skills for multinational companies. Research orientation:

Effective communication, student-centered learning approaches and teacher training.

### **PhDr. Jan Zápál, Ph.D.**

Assistant Professor

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Jan Zápál has been an Assistant Professor at CERGE-EI (under U.S. permanent charter) as of September 2012. He has been an Assistant Professor at CERGE, Charles University and a Researcher at the Economics Institute of the Academy of Sciences of the Czech Republic, since September 2014. Between July 2013 and August 2014, he has also worked as a Researcher at CERGE, Charles University. He received his Master's degree from the Institute of Economic Studies at Charles University in 2005 and a Ph.D. degree from the London School of Economics and Political Science in 2012. During his Ph.D. studies he was a Visiting Student Researcher at the Californian Institute of Technology (2010 to 2011), held an Economica Scholarship awarded by the LSE Department of Economics (2007 and 2008), and won the first prize in the Young Economist of the Year competition organized by the Czech Economic Society (2008). Between 2012 and 2014 he was a Post-doctoral Fellow at IAE-CSIC, Barcelona.

Research orientation:

Political economics, economic theory, dynamic bargaining models, effect of status-quo and its determination in the context of group decision making, decision making in monetary policy committees.

**doc. Krešimir Žigić, PhD.**

Citigroup Endowment Associate Professor with Tenure

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Krešimir Žigić is the Citigroup Endowment Associate Professor with tenure at CERGE-EI (under US permanent charter) since 2007 and a member of the Executive and Supervisory Committee of CERGE-EI since 2004. He is a Docent (Associate Professor) at CERGE, Charles University since 2012 and a Researcher at the Economics Institute of the Academy of Sciences (EI) since 1993. Since September 2015 he has served as Deputy Director for Graduate Studies at CERGE and EI (previously also 1997–1999 and 2005–2008). Graduated from the Faculty of Economics, University of Zagreb, B.A. 1982, M.A. 1988. Ph.D. in Economics, CERGE-EI, 1996. Assistant Professor, CERGE, Charles University, 1996–2012. At CERGE-EI (under US permanent charter) he was Philip Morris Associate Professor, Fall 2001 – Fall 2002, Altria Group Associate Professor, Spring 2003, and Associate Professor of European Economic Issues, Česká spořitelna Chair, Fall 2003 – Spring 2007. Financial Officer, Rade Koncar Corporation, Zagreb, 1982–1990. Lecturer, Central European University, 1994. Lecturer, World Bank and Joint Vienna Institute Comprehensive Course, 1993–2003.

Research orientation:

International trade, industrial organization, applied microeconomics.



## V. TEACHING SCHEDULE SPRING SEMESTER 2016

*The schedules are subject to change.*

*Most recent versions are at [https://iweb.cerge-ei.cz/phd/prog\\_details/coursebook/](https://iweb.cerge-ei.cz/phd/prog_details/coursebook/)*

