

## University of Minnesota - Twin Cities

Department of Economics  
1035 Heller Hall  
271 - 19th Avenue South  
Minneapolis, Minnesota 55455  
U.S.A.

(612) 625-6353  
(612) 624-0209 FAX

*Placement Director*  
Fabrizio Perri  
(612) 625-7504 or  
(612) 204-5526  
fperri@umn.edu  
*Placement Coordinator*  
Catherine Bach  
(612) 625-6859  
c-bach@umn.edu

## Curriculum Vitae Fall 2007

### HAKAN INAL

#### Personal Data

##### *Home Address*

1040 27<sup>th</sup> Avenue SE, Apt. C  
Minneapolis, MN 55414

*Citizenship:* Turkey (F-1) Visa

##### *Telephone Numbers*

Cell: (612) 217-3285  
Office: (612) 625-4842  
E-mail: inal@econ.umn.edu  
URL: www.econ.umn.edu/~inal

#### Major Fields of Concentration

Microeconomics, Public Economics, Law and Economics

#### Education

<i>Degree</i>	<i>Field</i>	<i>Institution</i>	<i>Year</i>
Ph.D	Economics	University of Minnesota (expected)	2008
M.A.	Economics	University of Minnesota	2007
M.A.	Economics	Bogaziçi University (Turkey)	1999
B.S.	Computer Engineering	Bogaziçi University (Turkey)	1996

#### Dissertation

Title: "Essays on Economic Design"

Dissertation Advisors: Professor Marcel K. Richter and Professor Jan Werner

Expected Completion: Summer 2008

#### References

Professor Marcel K. Richter	(612) 625-7832 richter@econ.umn.edu	Department of Economics University of Minnesota 1035 Heller Hall 271 - 19 <sup>th</sup> Avenue South Minneapolis, MN 55455
Professor Jan Werner	(612) 625-0708 jwerner@econ.umn.edu	
Professor David Rahman	(612) 625-3525 dmr@umn.edu	
Dr. Simran Sahi	(612) 625-6353 ssahi@econ.umn.edu	

#### Honors and Awards

Fall 2004	<i>Distinguished Instructor Award</i> , Department of Economics, University of Minnesota.
1999 - 2000	Graduate School Fellowship, University of Minnesota.
1997	Letters of honorary mention from the Rector's office and from the Dean's office for extraordinary TA services, Bogaziçi University.
1992 - 1996	Husamettin Tugac Foundation Scholarship-TUBITAK (Turkish Scientific and Technical Research Council).

## Teaching Experience

- 2007 - 2008 *Teaching Assistant*, Operations and Management Science Department, Carlson School of Management, University of Minnesota, Minneapolis, Minnesota. Teaching Assistant for *Business Statistics*.
- 2000 - 2007 *Instructor*, Department of Economics, University of Minnesota, Minneapolis, Minnesota. Taught *Principles of Microeconomics*, *Intermediate Microeconomics*, *International Economics*, and *Public Economics*.
- 2002 - 2003 *Guest Lecturer*, Department of Economics, University of Minnesota, Minneapolis, Minnesota. Presented “The Effects of Economic Liberalization on Labor and Market Structure: The Case of Turkey” to *Principles of Microeconomics* courses.
- 1999 - 2000 *Teaching Assistant*, Department of Economics, University of Minnesota, Minneapolis, Minnesota. Led recitation sections for *Principles of Microeconomics*.
- 1995 *Teaching Assistant*, Department of Computer Engineering, Bogaziçi University, Istanbul, Turkey.
- 1994-1995 *Instructor*, on a volunteer basis, for Computer Design and Pascal Programming Language courses in Kabatas High School, Istanbul, Turkey.

## Research Experience

- 1998 - 1999 *Research and Teaching Assistant*, Department of Economics, Bogaziçi University, Istanbul, Turkey.
- 1997 - 1998 *Research and Teaching Assistant*, Department of Mathematics, Bogaziçi University, Istanbul, Turkey.

## Professional Experience

- 1999 Software designer and developer for an economics experiment at Bogaziçi University.
- 1997 Data processor and software controller for Sisli City Planning Project, Istanbul, Turkey.
- 1995-1997 Software expert in a software company (SFS-MAN) in Turkey, Istanbul, Turkey.

## Publications

- “A Heuristic Approach for Finding the Minimum Delay Spanning Tree in Topological Design of Interconnected LANs,” (with Cem Ersoy), in *Proceedings of the Eleventh International Symposium on Computer and Information Sciences*, November 1996, vol. II. pp. 785-791.

## Papers

Auction Theory:

- “An Extension of Ausubel's Auction for Heterogeneous Discrete Goods”
- “An Efficient Auction for Heterogeneous Discrete Goods When Preferences are Separable”
- “An Efficient Auction for Heterogeneous Discrete Goods,” (work in progress).

Law and Enforcement:

- “Choice of Law Enforcement,” (work in progress).
- “Private vs. Public Externalities and Enforcement,” (work in progress).

## Other Papers

- “The Design Of An Experimental Study On Elections And Some Negative Results On Strong Nash Implementation,” unpublished M.A. Thesis, Bogaziçi University, 1999.
- “On Strongly Implementable Social Choice Correspondences,” mimeo, Bogaziçi University, 1998.
- “Notes on the Refinements of the Broad Majoritarian Compromise,” with Murat R. Sertel, mimeo, Bogaziçi University, 1998.

## Presentations

“An Extension of Ausubel’s Auction for Heterogeneous Discrete Goods,” GAMES 2008, Third Congress of the Game Theory Society, July 2008, Evanston, Illinois.

## Computer Skills

Various software programs (Word, Excel, PowerPoint, LaTeX, etc.) and programming languages (C, C++, Pascal, Visual Basic, HTML, etc.). Experience in designing software projects using both structured programming and object-oriented programming.

## Languages

English (Fluent), Turkish (Native)

## Dissertation Abstract

### Essay 1: *An Extension of Ausubel's Auction for Heterogeneous Discrete Goods* (Job Market Paper)

It is well-known that when multiple goods are to be auctioned, standard auction mechanisms are generally inefficient. Ausubel’s dynamic auction for heterogeneous goods (AER 2006) is among the few exceptions. It yields an efficient equilibrium outcome when bidders have private values, i.e., values that are not interdependent. However, Ausubel’s mechanism works in a limited environment when goods are discrete. If bidders’ values for goods are not integers, then the auction mechanism may not yield an efficient allocation without any information on bidders’ values. In this paper, I extend Ausubel’s auction for heterogeneous discrete goods to real-valued quasilinear utility functions. The mechanism I propose reaches a Walrasian equilibrium price vector in finite “steps” without any additional information on bidders’ values. I also show that truthful bidding constitutes an efficient equilibrium.

### Essay 2: *An Efficient Auction for Heterogeneous Discrete Goods* (Work In Progress)

Designing a dynamic efficient auction mechanism for multiple objects when bidders’ values are interdependent is one of the challenging questions of the auction theory. Perry and Reny (REStud 2005) proposed an ascending multi-unit discrete goods auction mechanism that has an efficient equilibrium outcome when bidders’ values are interdependent and goods are homogeneous. They show that Ausubel’s ascending auction for homogeneous goods (AER 2004) has an efficient equilibrium outcome when there are two bidders whose values are interdependent. In this paper, I extend Perry and Reny auction mechanism to heterogeneous goods and show that Ausubel’s auction for heterogeneous discrete goods (AER 2006) has an efficient equilibrium when there are two bidders whose values are interdependent.

### Essay 3: *An Efficient Auction for Heterogeneous Discrete Goods When Preferences are Separable*

An important question in auction theory is designing a dynamic efficient auction mechanism for multiple objects when bidders’ values are interdependent. Perry and Reny (REStud 2005) introduced an efficient auction for discrete homogeneous goods when bidders’ values are interdependent. In this paper, I propose an ascending auction mechanism for heterogeneous goods when bidders’ values are interdependent. I construct the auction mechanism by using a Perry and Reny auction mechanism for each type of good. I show that if agents’ utility functions are additively separable in goods, quasilinear in money and agents’ budget constraints are not binding, then this auction mechanism has an efficient equilibrium