

## Esteban D. Arcaute Aizpuru

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## Education

**Ph.D Candidate** **2004-Present**  
**Computational and Mathematical**  
**Engineering (CME)** **Stanford**  
Algorithmic and modeling problems related to game, network and economic equilibrium theory.  
**Thesis defended (04/2009) - Expected graduation 09/2009** **University**

**Master of Science** **June 2007**  
**CME** **Stanford University**  
Courses in theoretical computer science; approximation algorithms; algorithmic game theory; linear, nonlinear and numerical optimization; information networks; stochastic models; economic modeling.  
Final GPA: 4.1/4.0

**Master's Degree** **2001-2002**  
**Applied Mathematics** **Université de Metz**  
Graduated with honors in December 2002

**Diplôme d'Ingénieur** **1998-2002**  
**Ecole Supérieure d'Electricité** **Supélec**  
Equivalent to a BS and a MS degree in electrical and computer engineering.

## Research and Work Experience

**Research Intern** **Summers of 2006, 2007 and 2008**  
**Yahoo! Research** **Santa Clara, Ca**  
**2008:** Research on allocation of display advertisement and mathematical models for social networks.  
Mentor: John Tomlin. Collaborators: Sihem Amer-Yahia, Ravi Kumar and Sergei Vassilvitskii.  
**2007:** Research on mathematical models for social networks and online auctions.  
Mentor: John Tomlin. Collaborators: Rica Gonen, Ravi Kumar and Mohammad Mahdian.  
**2006:** Research on economic incentives in networks, online auctions and graph partitioning.  
Mentor: John Tomlin. Collaborators: Zoe Abrams, Arpita Ghosh and Ravi Kumar.

**Instructor** **Summer 2008**  
**Institute for Computational and**  
**Mathematical Engineering (ICME)** **Stanford**  
Introduction to Discrete Mathematics and Algorithms (CME 105). Upper undergraduate/Masters  
level course. Proposed, designed and taught a new course at Stanford University. **University**

**Consultant** **April 2003-April 2004**  
**SEGIME, Groupe ALTRAN** **France and Belgium**  
Software consultant for ST Microelectronics, France.  
Project leader for Renault France.  
Software consultant for Groupe PSA Peugeot-Citroën.

**Research Internships** **Summers 2001 and 2002**  
**Groupe PSA and Imperial College** **France and UK**  
**2002:** Statistical modeling of car-production costs (*Groupe PSA Peugeot-Citroën*, France).  
**2001:** Undergraduate Research Opportunities Programme, CS department (*Imperial College, UK*)

## Publications and Current Projects

*Social Networks and Stable Matchings in the Job Market*, with S. Vassilvitskii.

To appear at the 5th International Workshop on Internet and Network Economics (**WINE'09**)

*Online Allocation of Display Advertisements Subject to Advanced Sales Contracts*, with S. Alaei, S. Khuller, W. Ma, A. Malekian and J. Tomlin.

The 3rd Annual International Workshop on Data Mining and Audience Intelligence for Advertising (**ADKDD'09**)

*Tree Formation Games*, with R. Johari and S. Mannor.

Invited to the 46th Allerton Conference on Communication, Control and Computing (**Allerton'08**)

Presented at **INFORMS 2008 annual meeting**

In preparation for submission to the journal **Games and Economic Behavior**

*Local Two-Stage Myopic Dynamics in Network Formation Games*, with R. Johari and S. Mannor.

The 4th International Workshop on Internet and Network Economics (**WINE'08**)

Presented at the 3rd World Congress of the Game Theory Society (**GAMES'08**)

*On Threshold Behavior in Query Incentive Networks*, with A. Kirsch, R. Kumar, D. Liben-Nowell and S. Vassilvitskii.

The 8th ACM conference on Electronic Commerce (**EC'07**)

*Dynamics and Stability in Network Formation Games with Bilateral Contracts*, with E. Dallal, R. Johari and S. Mannor.

The 46th IEEE Conference on Decision and Control (**CDC'07**)

*Network Formation: Bilateral Contracting and Myopic Dynamics*, with R. Johari and S. Mannor.

The 3rd International Workshop on Internet and Network Economics (**WINE'07**)

Accepted to the IEEE journal **Transactions on Automatic Control**

*Deterministic Decentralized Search in Random Graphs*, with N. Chen, R. Kumar, D. Liben-Nowell, M. Mahdian, H. Nazerzadeh and Y. Xu.

The 5th International Workshop on Algorithms and Models for the Web-Graph (**WAW'07**)

Accepted to a special issue of the journal **Internet Mathematics**

*A First Result in Network Formation Games with Capacity Constraints*. Work in progress.

*Competition in the Airline Industry*, with S. Severinov. Work in progress.

## Languages, Activities, Awards and Professional Service

Spanish - mother tongue, French - bilingual, English - fluent (TOEFL: 290/300)

2006-2007: Microsoft Research and Microsoft Live Labs Fellowship - *finalist*

2005-2006: President of the SIAM Stanford Student Chapter

1995-1997: Recipient of the "Excellence Scholarship" from the French Government (2 years)

Summer 1995: The U.S.A. Department of Energy High School Honors Research Program at Fermilab

Sports: Karate (10 years), Handball (4 years), Basketball (3 years)

Reviewer: Games and Economic Behavior, Algorithmica, SODA, EC, WINE, WWW and CDC