

ELENA MOLIS
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Contact Information:

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Citizenship: Spanish

Education:

- 2008 PhD in Economics, University of the Basque Country.
Thesis Title: "Stability in Decentralized Roommate Markets."
Advisors: Elena Iñarra and M^a Concepción Larrea.
Committee Members: Rob Irving, Bettina Klaus, Jean Lainé, Jordi Massó and Federico Valenciano.
- 2005 MA in Economics.
- 2003 BA in Economics, University of the Basque Country.

Teaching and Research Fields:

Primary fields: Matching Theory, Mechanisms Design, Game Theory.
Second fields: Microeconomic Theory, Social Choice.

Research Experience:

- 2008 – present Post-doctoral researcher, CEREC (FUSL).
- 2009 – present Associate fellow of the Center for Operations Research & Econometrics (CORE).
- 2004 – 2008 Research assistant for Prof. Elena Iñarra, University of the Basque Country.

Teaching experience:

- Fall 2007 Microeconomic Theory I (in English), University of the Basque Country, teaching assistant for Prof. Elena Iñarra.
- Spring 2006 Microeconomic Theory II (in English), University of the Basque Country, teaching assistant for Prof. M^a Carmen Gallastegui.

Professional Activities:

Talks in Conferences:

- 2010 PET10 Conference, Istanbul (June 2010); ERID Matching Conference, co-sponsored by the Wallis Institute, Duke University, Durham (May 2010); Matching Theory and Mechanism Design Workshop, Oxford (March 2010);
- 2009 6th Logic, Game Theory and Social Choice, Tsukuba (August 2009); PET09 Conference, Galway (June 2009); IAP Meeting, Leuven (June 2009); CTN Workshop 2009: Matching, Coalitions, Networks and Behavior, Maastricht (January 2009);

- 2008 II Workshop Caen-Bilbao, Bilbao (November 2008); ICALP Workshop: Match-up, Reijkjavic (July 2008);
- 2007 Annual Conference of Association of Southern European Economic Theorists, Padova (November 2007); III Spain, Italy and Netherlands Meeting on Game Theory and VII Spanish Meeting On Game Theory, Madrid (July 2007); 5th Logic, Game Theory and Social Choice, Bilbao (June 2007); Workshop on Matchings: Theory, Applications, and Experiments, Barcelona (June 2007); I Workshop Caen-Bilbao, Caen (February 2007);
- 2006 XXXI Simposio del Análisis Económico, Oviedo (December 2006); 3rd Meeting of the Spanish Network on Social Choice, Valladolid (November 2006); 4th Bilbao Iruñea Meetings on Economic Decision Theory, Pamplona (April 2006).

Seminars:

CEREC Seminar, Facultés Universitaires Saint-Louis (November 2008); RGEA Job Market Seminar, University of Vigo (March 2008); METEOR Seminar, Maastricht University (September 2007); Game Theory and Social Choice Seminar, University of the Basque Country (January 2007).

Projects (collaboration):

- “University Governance” IAP project 6/09 granted by Belgian Government (2007-2011), main researcher (FUSL): Prof. Xavier Wauthy.
- “Game Theory and Social Choice: Foundations and Applications to economics and politics.”
- Consolidated research group GIC07/146-IT-377-07 granted by Basque Government (2007-2012), main researcher: Prof. Federico Valenciano.
- “Game Theory and Social Choice: Foundations and Applications.” Research group UPV-EHU, GIU06/44 granted by University of the Basque Country (2007 – 2009), main researcher: Prof. Federico Valenciano.
- “Theory and Design of Collective Decision-Making: Voting, Bargaining and Matching.” Franco-Spanish Exchange Program HF-2006-0021/EGIDE-Picasso granted by the Spanish Ministerio de Educación y Ciencia. (2007 – 2009), main researcher: Prof. Federico Valenciano.
- Consolidated research group 9/UPV 00031.321-15352/2003 granted by Basque Government (2004 – 2005). Main researcher: Prof. Jose Manuel Zarzuelo.

Refereeing for journals:

Theory and Decision

Academic Visits:

Department of Economics, Maastricht University (April – June 2007) (September – November 2007).

Consulting Activities:

NAIDER S.L, Basque Country (2003): Tools to finance the recovery of contaminated soils in the Basque Country.

Honors, Scholarships and Fellowships:

- 2008 – 2010 Postdoctoral Fellowship awarded by Facultés Universitaires Saint-Louis.
- 2005 – 2008 Predoctoral Fellowship awarded by the University of the Basque Country.
- 2006 XXXI Simposio del Análisis Económico Bursary.
- 2004 – 2005 Collaboration Fellowship. University of the Basque Country.

Published Papers:

“Random Paths to P-stability in the Roommate Problem.”

(Coauthored with Elena Iñarra and Conchi Larrea)

International Journal of Game Theory 36: 461-471, 2008.

For solvable roommate problems with strict preferences Diamantoudi et al. (Games Econ Behav 48: 18–28, 2004) show that for any unstable matching, there exists a finite sequence of successive myopic blocking pairs leading to a stable matching. In this paper, we define P-stable matchings associated with stable partitions and, by using a proposal-rejection procedure, generalize the previous result for the entire class of roommate problems.

Discussion Papers:

“Exchange of Indivisible Goods and Indifferences: the Top Trading Absorbing Sets Mechanisms.” (Under revision)

(Coauthored with Jorge Alcalde-Unzu)

There is a wide range of economic problems that involve the exchange of indivisible goods with no monetary transfers, starting with the housing market model of the seminal paper by Shapley and Scarf (1974) and including other problems such as kidney exchange or school choice problems. The classical solution to many of these models is to apply an algorithm/mechanism called Top Trading Cycles, attributed to David Gale, which satisfies good properties for the case of strict preferences. In this paper, we propose a family of mechanisms, called Top Trading Absorbing Sets mechanisms, which generalizes the Top Trading Cycles to the general case in which individuals are allowed to report indifference, while preserving all its desirable properties.

“The Stability of the Roommate Problem Revisited.” (Submitted)

(Coauthored with Elena Inarra and Conchi Larrea)

The lack of stability in some matching problems suggests that alternative solution concepts to the core might be applied to find predictable matchings. We propose the absorbing sets as a solution for the class of roommate problems with strict preferences. This solution, which always exists, either gives the matchings in the core or predicts some other matchings when the core is empty. Furthermore, it satisfies an interesting property of outer stability. We also characterize the absorbing sets, determine their number and, in case of multiplicity, we find that they all share a similar structure.

“Experimental results on the roommate problem.” (Submitted)

(Coauthored with Robert Veszteg)

We use laboratory experiments to analyze decentralized decision-making in one-sided matching markets. We find that subjects tend to make decisions in line with theoretical models, as their offering and accepting decisions are only guided by the objective of improving upon the status quo. However, isolated individual mistakes, that do not disappear with experience or time, often make theoretically-stable matchings unstable in the laboratory. Markets with incomplete information are especially prone to this problem.