Ata Atay

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CONTACT Department of Mathematical Economics, Citizenship: Turkey
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RESEARCH

Game theory, matching theory, market design, operations research.

Interests

CURRENT Serra Húnter Assistant Professor of Economics October 2021–

Position Department of Mathematical Economics, Finance and

Actuarial Sciences, University of Barcelona.

ACADEMIC

Positions Assistant Professor of Economics March 2020–Oct 2021

Department of Economic Analysis, UNED.

Postdoctoral researcher Sep 2019–Feb 2020

CEREC & CORE, UCLouvain.

Postdoctoral researcher Oct 2017–Aug 2019

Institute of Economics, Hungarian Academy of Sciences.

Half-time lecturer Feb 2018–Feb 2019

Department of Operations Research and Actuarial Sciences,

Corvinus University of Budapest.

EDUCATION PhD in Economics, excel·lent (summa) cum laude 2017

Universitat de Barcelona, Spain. Advisor: Marina Núñez

MSc in Advanced Mathematics 2011

Universitat Autònoma de Barcelona, Spain.

BSc in Mathematical Engineering 2010

Yildiz Technical University, Turkey.

ACADEMIC STAYS Simons Laufer Mathematical Sciences Institute (SLMath) Aug-Oct 2023

formerly Mathematical Science Research Institute (MSRI)

Research member at the program

Mathematics and Computer Science of Market and Mechanism Design.

Center for Operations Research and Econometrics (CORE) May 2019

Université catholique de Louvain

Hosts: Ana Mauleon, Vincent Vannetelbosch

University of Barcelona Short stay (2 weeks), Feb 2019

Host: Pedro Calleja

University of Barcelona Short stay (2 weeks), Feb 2018

Host: Marina Núñez

Tepper School of Business Jan-May 2016

Carnegie Mellon University

Hosts: Isa Hafalir, M. Bumin Yenmez

## Publications

- 1. Atay, A. and C. Trudeau (2024). Queueing games with an endogenous number of machines, *Games and Economic Behavior*, 144: 104–125.
- Atay, A., A. Mauleon, S. Schopohl, and V. Vannetelbosch (2023). Key players in network-oriented interventions, *Journal of Economic Interaction and Coordination*, 18: 879–907.
- 3. Atay, A., E. Bahel, and T. Solymosi (2023). Matching markets with middlemen under transferable utility, *Annals of Operations Research*, 322: 539–563.
- 4. Atay A., P. Calleja, and S. Soteras (2021). Open shop scheduling games, *European Journal of Operational Research*, 295: 12–21.
- 5. Atay A., A. Mauleon, and V. Vannetelbosch (2021). A bargaining set for roommate problems, *Journal of Mathematical Economics*, 94: 102465.
- 6. Atay A. and M. Núñez (2019). Multi-sided assignment games on m-partite graphs, *Annals of Operations Research*, 279: 271–290.
- 7. Atay A. and M. Núñez (2019). A note on the relationship between the core and stable sets in three-sided markets, *Mathematical Social Sciences*, 98: 10–14.
- 8. Atay A. and T. Solymosi (2018). On bargaining sets of supplier-firm-buyer games, *Economics Letters*, 167: 99–103.
- 9. Atay A. (2017). An alternative proof of the characterization of core stability for the assignment game, *Operations Research Letters*, 45: 217–219.
- Atay A., F. Llerena, and M. Núñez (2016). Generalized three-sided assignment markets: core consistency and competitive prices, TOP, 24: 572–593.

## WORKING PAPERS

- 1. A many-to-one job market: more about the core and the competitive salaries, with Marina Núñez and Tamás Solymosi, April 2024.
- $2. \ \, {\rm Optimistic\ and\ pessimistic\ approaches\ for\ cooperative\ games,\ with\ Christian\ Trudeau,} \\ \ \, {\rm March\ 2024}.$
- 3. Complementarities in childcare allocation under priorities, with Antonio Romero-Medina, August 2023.
- 4. Matching markets with farsighted couples, with Sylvain Funck, Ana Mauleon and Vincent Vannetelbosch, April 2023.
- 5. Limited farsightedness in priority-based matching, with Ana Mauleon and Vincent Vannetelbosch, December 2022.
- School choice with farsighted students, with Ana Mauleon and Vincent Vannetelbosch, November 2022.

SUPERVISION OF Ph.D. THESIS

Martí Jané Ballarín, University of Barcelona.

Fall 2024-...

Topics: Computational social choice and (algorithmic) game theory. Co-advisor with Mikel Álvarez-Mozos.

Teaching Experience	Lecturer, University of Barcelona: Non-linear programming and network flows Joint BA in Statistics together with	Fall 2022–
	Barcelona Tech-UPC (Taught at the UPC). Decision Theory (BA in Business Management) Mathematics 2 (BA in Business Management) Mathematics 2 (BA in Economics) Mathematics (BA in International Business) Mathematics 1 (BA in Economics) Decision Theory (BA in Business Management)	Spring 2022 Spring 2022 Spring 2022 Fall 2021 Fall 2021
	Lecturer, UNED: Introduction to Macroeconomics (BA in Economics) Introduction to Macroeconomics (BA in Economics)	Spring 2021 Spring 2020
	Lecturer, Corvinus University of Budapest: Market Design (BA in Economics) Operations Research (BA in Economics)	Fall 2018 Spring 2018
	Teaching Assistant, University of Barcelona: Game Theory (BA in Business Administration)	Fall 2016
GRANTS	"Areas Emergents" Research Grant of UB as co-PI of AS017672 Research Project (13.5K EUR)	July 2022–Dec 2023
	"Networks in societies: information, elections, and financial markets"  Hungarian National Research, Development, and Innovation Office 2018–2021  PD-128348 Individual Project (15.6 M HUF)	
	Barcelona Economic Analysis Team Travel Grant (1K EUR)	June 2022
	Cost Action European Network for Game Theory (CA 1 Short Term Scientific Mission Grant (1.5K EUR)	<b>16228)</b> 2019
	Cost Action European Network for Game Theory (CA 1 Short Term Scientific Mission Grant (1.2K EUR)	<b>16228</b> ) 2019
	Cost Action IC1205 Short Term Scientific Mission Gran	t 2015
Participation in Research Projects	Distribución equitativa en problemas de reparto, coaliciones, redes y mercados the Spanish Ministry of Science, Innovation, and Universities PIs: Marina Núñez and Carles Rafels	Feb 2023–Aug 2024
	Networks in societies: information, elections, and financial markets" University of Barcelona "Areas Emergents" Research Grants As co-PI with Oriol Tejada (PI)	July 2022–Dec 2023
	Social and economic network formation under limited farsightedness: theory and applications the Belgian French speaking community ARC project 15/20-072	Sep 2019–Feb 2020
	PIs: Ana Mauleon and Vincent Vannetelbosch  Game Theory Working Group  Spanish Society of Statistics and Operations Research (SEIO)	Feb 2019–
	PI: Encarnación Algaba  Heuristic problem solving in matching mechanisms  Hungarian Academy of Sciences  PI: Péter Biró	Sep 2017–Feb 2020

## Game theory and assignment markets

2014 - 2017

Consolidated research group (2014SGR40) by Generalitat de Catalunya

PI: Marina Núñez

MEMBER OF

Pierre de Callataÿ, UCLouvain, Belgium.

June 2023

PH.D. COMMITTEES "Three essays on farsightedness in network formation". Saadia El Obadi, Universitat de Lleida, Spain.

October 2019

"Generalizations of assignment games and information market games".

Invited Talks **2024:** University of Vigo (Spain), Lausanne Matching and Market Design Workshop, HEC Lausanne (Switzerland).

2023: IMW, University of Bielefeld (Germany).

**2022:** QuantOM at HEC-Liège (Belgium), ORSTAT at KU Leuven (Belgium), University of Granada (Spain).

**2019:** Aix-Marseille School of Economics (France), Center of Operations Research and Econometrics at UCLouvain (Belgium), CEREC at Université Saint-Louis Brussels (Belgium), University of Barcelona (Spain).

**2017:** School of Government TEC Monterrey (Mexico), Centre d'Économie de la Sorbonne (France).

## Presentations

2024: the 17th Meeting of fthe SSCW (Paris, France), SING19 (Besançon, France).

**2023:** the 12th Lisbon Meetings in Game Theory and Applications (Lisbon, Portugal), the 13th Conference on Economic Design (Girona, Spain).

**2022:** the 33rd Stony Brook International Conference on Game Theory (Stony Brook, NY), the 12th Conference on Economic Design (Padova, Italy), the 25th Coalition Theory Network Workshop (Barcelona, Spain).

**2021:** International Conference on Social Choice and Voting Theory, PPE at Virginia Tech (online).

**2019:** the 11th Conference on Economic Design (Budapest, Hungary), SING15 (Turku, Finland), the 11th Lisbon Meetings in Game Theory and Applications (Lisbon, Portugal). **2018:** the 14th Meeting of the SSCW (Seoul, South Korea), SEIO 2018 (Oviedo, Spain).

**2018:** the 14th Meeting of the SSCW (Seoul, South Korea), SEIO 2018 (Oviedo, Spain), University of Barcelona.

**2017:** the 10th Conference on Economic Design (York, UK), the 1st Catalan Economic Society Conference (Barcelona, Spain).

**2016:** GAMES 2016 (Maastricht, the Netherlands), SING12 (Odense, Denmark), the 13th Meeting of the SSCW (Lund, Sweden), Pennsylvania Economic Theory Conference 2016, *Poster session* (State College, PA), CMU-Pitt Economic Theory Seminar (Pittsburgh, PA).

**2015:** the 15th SAET Conference (Cambridge, UK), the 26th International Conference on Game Theory (Stony Brook, NY), the 9th Conference on Economic Design (Istanbul, Turkey), Match-UP 2015 (Glasgow, UK).

**2014:** International Workshop on Game Theory and Economic Applications *Poster session* (São Paulo, Brazil), SING 10 (Krakow, Poland).

# Professional Activities

## **Program Committee:**

2022-... the Annual University of Barcelona Game Theory Workshop.

**2019:** The 11th Conference on Economic Design 2019 (Budapest, Hungary).

Organizing Committee:

2022-... the Annual University of Barcelona Game Theory Workshop.

**2021:** The V SEIO Course on Game Theory: Algorithmic and game theoretic aspects of matching markets (Barcelona, Spain).

2019: 11th Conference on Economic Design 2019 (Budapest, Hungary).

## Referee for:

Annals of Operations Research, Games and Economic Behavior, IISE Transactions, International Journal of Game Theory, International Journal of Economic Theory, Journal of Mathematical Economics, Mathematical Social Sciences, SN Business & Economics, Operational Research: An International Journal.

Reviewer for:

Mathematical Reviews.

ACCREDITATIONS One 'sexenio' (six-year period research recognition) for 2016-2021 by the

Catalan University Quality Assurance Agency (AQU).

Professor agregat by the

Catalan University Quality Assurance Agency (AQU).

Profesor contratado doctor by the

Spanish National Agency for Quality Assessment and Accreditation (ANECA).

Profesor ayudante doctor by the

Spanish National Agency for Quality Assessment and Accreditation (ANECA).

**Professor lector** by the

Catalan University Quality Assurance Agency (AQU).

Languages

Turkish (native), English (fluent), Spanish (fluent), Catalan (B1).

## References

Prof. Péter Biró

Institute of Economics

Hungarian Academy of Sciences UCLouvain

ana.mauleon@uclouvain.be biro.peter@krtk.mta.hu

Prof. Marina Núñez Prof. Vincent Vannetelbosch School of Economics CORE

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Prof. Ana Mauleon

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