

Georgios Amanatidis

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Academic Appointments

Postdoctoral Researcher, September 2019 – present
Department of Computer, Control and Management Engineering
Sapienza Università di Roma, Rome, Italy
Host: Stefano Leonardi

Postdoctoral Researcher, September 2017 – August 2019
Networks & Optimization Group
Centrum Wiskunde & Informatica (CWI), Amsterdam, Netherlands
Host: Guido Schäfer

Education

Ph.D. in Computer Science, July 2014 – August 2017
Athens University of Economics & Business (AUEB), Greece
Advisor: Vangelis Markakis
Thesis: *Algorithmic and Mechanism Design Aspects of Problems with Limited—or no—Payments*

M.Sc. in Mathematics, August 2009
School of Mathematics, Georgia Institute of Technology, USA

Diploma in Applied Mathematics (five-year degree), July 2004
National Technical University of Athens (NTUA), Greece

Publications

Google Scholar: 282 citations, h-index = 8, i10-index = 7

Journal Papers (2)

Connected Realizations of Joint-Degree Matrices
Discrete Applied Mathematics, Vol. 250, 65-74, Dec. 2018
with B. Green and M. Mihail

Approximation Algorithms for Computing Maximin Share Allocations
ACM Transactions on Algorithms, Vol. 13(4), 52:1-52:28, Dec. 2017
with E. Markakis, A. Nikzad, and A. Saberi

Peer-Reviewed Conference Papers (14)

Peeking Behind the Ordinal Curtain: Improving Distortion via Cardinal Queries
34th AAAI Conference on Artificial Intelligence, AAAI 2020, to appear
with G. Birmipas, A. Filos-Ratsikas, and A. Voudouris

Multiple Birds with One Stone: Beating $1/2$ for EFX and GMMS via Envy Cycle Elimination
34th AAAI Conference on Artificial Intelligence, AAAI 2020, to appear
with A. Ntokos and E. Markakis

Budget-Feasible Mechanism Design for Non-Monotone Submodular Objectives: Offline and Online
20th ACM conference on Economics and Computation, EC 2019
with P. Kleer and G. Schäfer

Rapid Mixing of the Switch Markov Chain for Strongly Stable Degree Sequences and 2-Class JDMs
30th Annual ACM-SIAM Symposium on Discrete Algorithms, *SODA 2019*
with P. Kleer

An Improved Envy-Free Cake Cutting Protocol for Four Agents
11th International Symposium on Algorithmic Game Theory, *SAGT 2018*
with G. Christodoulou, J. Fearnley, E. Markakis, C.-A. Psomas, and E. Vakilou

Comparing Approximate Relaxations of Envy-Freeness
27th International Joint Conference on Artificial Intelligence, *IJCAI 2018*
with G. Birmas and E. Markakis

On Budget-Feasible Mechanism Design for Symmetric Submodular Objectives
13th Conference on Web and Internet Economics, *WINE 2017*
with G. Birmas and E. Markakis

Truthful Allocation Mechanisms Without Payments: Characterization and Implications on Fairness
18th ACM conference on Economics and Computation, *EC 2017*
with G. Birmas, G. Christodoulou, and E. Markakis

Coverage, Matching, and Beyond: New Results on Budgeted Mechanism Design
12th Conference on Web and Internet Economics, *WINE 2016*
with G. Birmas and E. Markakis

Inequity Aversion Pricing over Social Networks: Approximation Algorithms and Hardness Results
41st International Symposium on Mathematical Foundations of Computer Science, *MFCS 2016*
with E. Markakis and K. Sornat

On Truthful Mechanisms for Maximin Share Allocations
25th International Joint Conference on Artificial Intelligence, *IJCAI 2016*
with G. Birmas and E. Markakis

Approximation Algorithms for Computing Maximin Share Allocations
42nd International Colloquium on Automata, Languages, and Programming, *ICALP 2015, Track A*
with E. Markakis, A. Nikzad, and A. Saberi

Multiple Referenda and Multiwinner Elections Using Hamming Distances: Complexity and Manipulability
14th International Conference on Autonomous Agents and Multiagent Systems, *AAMAS 2015*
with N. Barrot, J. Lang, E. Markakis, and B. Ries

Provably-Secure Schemes for Basic Query Support in Outsourced Databases
21st IFIP WG11.3 Working Conference on Data and Application Security, *DBSec 2007*
with A. Boldyreva and A. O'Neill

Teaching Experience

Instructor:

Game Theory (Master's level), ILLC, University of Amsterdam, Spring 2018.

Algorithms, Department of Informatics, Athens University of Economics & Business, Spring 2017.

Teaching Assistant (for the Dept. of Informatics, AUEB):

Game Theory & Decision Theory, Spring 2015, Spring 2016, Spring 2017

Design & Analysis of Algorithms (Master's level), Fall 2016

Algorithms, Spring 2015, Spring 2016

Student Supervision

Sophie Klumper, 2018, M.Sc. in Econometrics and Operations Research, Vrije Universiteit (co-supervision with Guido Schäfer)
Thesis title: *Budget Feasible Mechanisms for Procurement Auctions*

Other Professional Experience

Online Learning Specialist, September 2011 – July 2017

ARNOS Online Education, Athens, Greece

Designing, developing, and managing online courses on various subjects in mathematics and computer science.

Optimization Consultant, December 2010 – June 2013

Enzyme RnD, Athens, Greece

Mathematical modeling of biomedical and logistics systems.

Participation in Research Projects

9/2019–present: ERC Advanced Grant *Algorithmic and Mechanism Design Research for Online Markets (AMDROMA)*. PI: Stefano Leonardi

9/2018–8/2019: NWO Gravitation Project *NETWORKS*. PI: Prof. Michel Mandjes

9/2017–8/2018: NWO Free Competition Grant *Societal Impact Games (SocialACT)*. PI: Guido Schäfer

9/2014–11/2015: THALES Basic Research Project *Algorithmic Game Theory (AGT)*. PI: Paul Spirakis

9/2014–11/2015: THALES Basic Research Project *Algorithms of Today (ALGONOW)*. PI: Stathis Zachos

Academic Visits

5/4/2019–13/4/2019: Sapienza University of Rome

Host: Stefano Leonardi

6/4/2018–16/4/2018: Athens University of Economics & Business

Host: Vangelis Markakis.

Supported by the COST Action CA16228: European Network for Game Theory.

21/10/2016–6/11/2016: Rensselaer Polytechnic Institute

Host: Vassilis Zikas

16/9/2016–23/9/2016: University of Liverpool

Host: George Christodoulou.

Supported by the COST Action IC1205 on Computational Social Choice.

Professional Service

Educational Committee member for the NWO Gravitation Project *NETWORKS*, 2018-2019

Program Committee member:

33rd AAI Conference on Artificial Intelligence (AAAI '19)

28th International Joint Conference on Artificial Intelligence (IJCAI '19)

1st Workshop on Theoretical Aspects of Fairness (WTAF@ICALP '19)

1st Fair Allocation in Multiagent Systems Workshop (FAMAS@AAMAS '19)

18th International Conference on Autonomous Agents and Multiagent Systems (AAMAS '19)

19th ACM conference on Economics and Computation (ACM EC '18)

The 27th International Joint Conference on Artificial Intelligence (IJCAI '18)

17th International Conference on Autonomous Agents and Multiagent Systems (AAMAS '18)

Reviewer:

SIAM Journal on Discrete Mathematics, Social Choice and Welfare, ACM Transactions on Economics and Computation, Journal of Autonomous Agents and Multi-Agent Systems, ACM *Journal of Experimental Algorithmics*, Computers & Operations Research

SODA '19, SAGT '19, ICALP '19, WINE '18, MFCS '18, SAGT '17, EC '17, CIAC '17, ICPP '17, WINE '16, ISCO '16, AAI '16, AAMAS '15

Selected Talks

Budget-Feasible Mechanism Design for Non-Monotone Submodular Objectives: Offline and Online Algorithms Postdocs in Europe Workshop (ALGPiE 2019), *Invited talk*, 16 October 2019
Workshop on Markets, Algorithms, Prediction, and Learning (MAPLE 2019), 19 September 2019
20th ACM conference on Economics and Computation (EC 2019), 27 June 2019

Comparing Approximate Relaxations of Envy-Freeness
Computational Social Choice Seminar, ILLC, University of Amsterdam, 14 November 2018
27th International Joint Conference on Artificial Intelligence (IJCAI 2018), 17 July 2018
7th International Workshop on Computational Social Choice (COMSOC 2018), 25 June 2018

Fair Allocation of Indivisible Resources
9th NETWORKS day, Leiden, 19 September 2018

An Improved Envy-Free Cake Cutting Protocol for Four Agents
13th Athens Colloquium on Algorithms & Complexity (ACAC 2018), 24 August 2018

On Budget-Feasible Mechanism Design for Symmetric Submodular Objectives
CWI-DIAMANT Seminar Combinatorics and Optimization, CWI, 14 February 2018
12th Athens Colloquium on Algorithms & Complexity (ACAC 2017), 25 August 2017

Coverage, Matching, and Beyond: New Results on Budgeted Mechanism Design
12th Conference on Web and Internet Economics (WINE 2016), 14 December 2016
11th Athens Colloquium on Algorithms & Complexity (ACAC 2016), 26 August 2016

On Truthful Mechanisms for Maximin Share Allocations
12th Conference on Web and Internet Economics (WINE 2015), 12 December 2016

Approximation Algorithms for Computing Maximin Share Allocations
2nd Algorithmic Game Theory in Athens colloquium (AGaThA 2016), 20 July 2016
11th Conference on Web and Internet Economics (WINE 2015), 10 December 2015
42nd International Colloquium on Automata, Languages, and Programming (ICALP 2015), 6 July 2015

Multiple Referenda and Multiwinner Elections Using Hamming Distances
1st Algorithmic Game Theory in Athens colloquium (AGaThA 2015), 27 May 2015
14th Conference on Autonomous Agents and Multiagent Systems (AAMAS 2015), 7 May 2015

Recent Grants and Distinctions

NWO Veni Grant: Algorithmic Fair Division in Dynamic, Socially Constrained Environments, 2020-2023. (amount: 250.000 €) [<https://www.nwo.nl/en/research-and-results/programmes/nwo/talent-scheme/veni-awards-2019.html>]

Distinguished Reviewer, IJCAI 2018.

Short-Term Scientific Mission Grant, COST Action CA16228: European Network for Game Theory, 2018.

Short-Term Scientific Mission Grant, COST Action IC1205 on Computational Social Choice, 2016.

Several Student Travel Grants (COMSOC 2016, WINE 2015, AAMAS 2015, WebSci 2009).

Doctoral level grant to participate in the Research Programme on Algorithmic Perspective in Economics and Physics, Centre de Recerca Matemàtica (CRM), Spain, 2015.