

Georgios (Yorgos) Amanatidis

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Research Interests

My main focus is on problems lying in the intersection of computer science and economics, often related to social choice theory. At the same time, I enjoy exploring other topics in theoretical computer science, as diverse as multi-party computation and Markov chain Monte Carlo algorithms for approximate graph sampling.

Academic Positions

Postdoctoral Researcher, September 2017 – present
Centrum Wiskunde & Informatica (CWI), Networks & Optimization Group, Netherlands
Host: Prof. Guido Schäfer

Education

Ph.D. in Computer Science, July 2014 – August 2017
Athens University of Economics & Business (AUEB), Greece
Advisor: Assoc. Prof. 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), June 2004
National Technical University of Athens (NTUA), Greece

Publications

Google Scholar: 219 citations, h-index = 7, i10-index = 6

Journal Papers

Connected Realizations of Joint-Degree Matrices
Discrete Applied Mathematics, to appear
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

Rapid Mixing of the Switch Markov Chain for Strongly Stable Degree Sequences and 2-Class Joint Degree Matrices
30th Annual ACM-SIAM Symposium on Discrete Algorithms, SODA 2019, forthcoming
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. Birmpas and E. Markakis

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

Truthful Allocation Mechanisms Without Payments: Characterization and Implications on Fairness
18th ACM conference on Economics and Computation, EC 2017
with G. Birmpas, 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. Birmpas 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. Birmpas 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

Co-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 Department of Informatics, Athens University of Economics & Business):

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

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

Algorithms, Spring 2015, Spring 2016

Participation in Research Projects

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: Prof. Guido Schäfer

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

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

Student Supervision

Sophie Klumper, 2017, M.Sc. in Econometrics and Operations Research, Vrije Universiteit
(co-supervision with Prof. G. Schäfer)

Thesis title: *Budget Feasible Mechanisms for Procurement Auctions*

Academic Visits

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

Host: Dr. Vangelis Markakis. Supported by the COST Action CA16228: European Network for Game Theory.

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

Host: Dr. Vassilis Zikas

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

Host: Dr. 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 for:

IJCAI '19, WTAF@ICALP '19 , FAMAS@AAMAS '19, AAMAS '19, EC '18, IJCAI '18, AAMAS '18

Reviewer for:

TEAC, JAAMAS, JEA, COR, WINE '18, MFCS '18, SAGT '17, EC '17, CIAC '17, ICPP '17, WINE '16, ISCO '16, AAAI '16, AAMAS '15

Grants and Distinctions

Distinguished Reviewer, IJCAI 2018

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

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

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