

Georgios (Yorgos) Amanatidis

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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: Asst. 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

Research

Google Scholar: 207 citations, h-index = 6, 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. Klier

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. Vakaliou
Also appeared as a poster in WINE 2017.

Comparing Approximate Relaxations of Envy-Freeness
27th International Joint Conference on Artificial Intelligence, IJCAI 2018
with G. Birmpas and E. Markakis
Also presented at the COMSOC 2018 workshop.

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
Also presented at the AGT@IJCAI 2016 workshop.

On Truthful Mechanisms for Maximin Share Allocations
25th International Joint Conference on Artificial Intelligence, IJCAI 2016
with G. Birmpas and E. Markakis
Also presented at the COMSOC 2016 workshop, and appeared as a poster in WINE 2016.

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
Also appeared as a poster in WINE 2015.

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

Other

Graphic Realizations of Joint-Degree Matrices, manuscript [arXiv:1509.07076], 2009
with B. Green and M. Mihail
Appeared as a poster at the DIMACS Workshop on New Directions in Algorithms, Combinatorics and Optimization, 2008.

Flexible Models for Complex Networks
2009 Web Science Conference, WebSci 2009
with M. Mihail and S. Young
Also appeared as a poster at the ARC2 GaTech workshop (October 2008).

Side-Channel Attacks
Workshop on Internet–Education–Science, Pristina, Serbia, 2004
with S. Zachos and V. Zikas

Teaching Experience

- Spring 2018: Game Theory (Master's level), Institute for Logic, Language and Computation, University of Amsterdam. Co-Instructor: Prof. Guido Schäfer
- 9/2014–6/2017: Teaching Assistant for the Department of Informatics, AUEB.
 Design & Analysis of Algorithms (Master's level), Fall '16
 Game Theory & Decision Theory, Spring '15, Spring '16, Spring '17
 Algorithms, Spring '15, Spring '16, Spring '17 (Co-instructor)
- 9/2011–6/2017: Mathematics Instructor at *ARNOS Online Education*, Athens, Greece.
 Taught and developed online courses for: Basic Combinatorics; Introduction to Mathematical Logic; Graph Theory;
 Design & Analysis of Algorithms; Automata, Computability & Complexity.
 Other courses taught: Calculus; Probability & Statistics; Linear Algebra; Differential Equations.
- 5/2011–10/2011: Mathematics Instructor at *ACADEMIC Tutoring Center*, Athens, Greece.
 Taught: Calculus; Linear Programming

8/2007–12/2008: Teaching Assistant for Georgia Tech's Distance Learning Program.
Distance Calculus II and III

8/2004–12/2008: Teaching Assistant for the School of Mathematics, Georgia Tech.
Calculus I, II, III; Differential Equations (Instructor); Linear & Discrete Mathematics; Finite Mathematics

Other Professional Experience

12/2010–6/2013: External Consultant at *Enzyme RnD*.
Mathematical modeling of biomedical and logistics systems.

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

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.

Student Supervision

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

Professional Service

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

Program Committee member for: AAMAS 2019, EC 2018, IJCAI 2018 (*Distinguished Reviewer*), AAMAS 2018

Reviewer for: ACM Journal of Experimental Algorithmics, Computers & Operations Research
WINE 2018, MFCS 2018, SAGT 2017, EC 2017, CIAC 2017, ICPP 2017, WINE 2016, ISCO 2016,
AAAI 16, AAMAS 2015

Talks

Comparing Approximate Relaxations of Envy-Freeness

- Computational Social Choice Seminar, ILLC, University of Amsterdam, 14 November 2018
- 27th International Joint Conference on Artificial Intelligence, 17 July 2018
- 7th International Workshop on Computational Social Choice, 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, 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, 25 August 2017

Coverage, Matching, and Beyond: New Results on Budgeted Mechanism Design

- 12th Conference on Web and Internet Economics, 14 December 2016
- CS Theory Seminar, AUEB, 11 November 2016
- 11th Athens Colloquium on Algorithms & Complexity, 26 August 2016

On Truthful Mechanisms for Maximin Share Allocations

- 12th Conference on Web and Internet Economics, 12 December 2016

Approximation Algorithms for Computing Maximin Share Allocations

- 2nd Algorithmic Game Theory in Athens colloquium, 20 July 2016
- 11th Conference on Web and Internet Economics, 10 December 2015
- 42nd International Colloquium on Automata, Languages, and Programming, 6 July 2015

Multiple Referenda and Multiwinner Elections Using Hamming Distances

- 1st Algorithmic Game Theory in Athens colloquium, 27 May 2015
- 14th International Conference on Autonomous Agents and Multiagent Systems, 7 May 2015
- CS Theory Seminar, AUEB, 27 March 2015

Flexible Models for Complex Networks

- Web Science Conference 2009: Society On-Line, 20 March 2009

Graphic Realizations of Joint-Degree Matrices

- ACO Student Seminar, Georgia Tech, Fall 2007

Grants and Distinctions

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

Runner-up for Georgia Tech's CETL/BP Outstanding Teaching Assistant Award 2009

ARC Student Fellowship, Georgia Tech, Summer 2008

ACO Student Research Fellowship, Georgia Tech, Spring 2007 and Fall 2008

Award for Academic Excellence, Technical Chamber of Greece, 2007

Entrance Scholarship, Greek State Scholarships Foundation, 1999

16th place in the "Archimedes" National Mathematics Competition (Greece), 1998

11th place in the "Archimedes" National Mathematics Competition (Greece), 1996

2nd Prize in the "Euclid" National Mathematics Competition (Greece), 1996