# Curriculum Vitae

Ioannis Caragiannis

## *Contact information*

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## *Research interests*

Design and analysis of algorithms, computational complexity, combinatorial optimization, approximation and online algorithms, algorithmic aspects of networks and communication, foundations of artificial intelligence/machine learning, algorithmic game theory, computational social choice

## *Education*

*University of Patras, Greece*

PhD in Computer Engineering and Informatics (October 1996 – April 2002)

PhD Thesis: Graph colorings and their application to efficient bandwidth allocation in WDM optical networks (advisor: Professor Christos Kaklamanis)

Diploma in Computer Engineering and Informatics (five-year curriculum, September 1991 – December 1996)

## *Professional experience*

*Department of Computer Science, Aarhus University, Denmark*

Professor (August 2020 – today)

*Protocol Labs, Inc.*

Scientific advisor for game theory (April 2022 – April 2023)

*Department of Computer Engineering and Informatics, University of Patras, Greece*

Professor (February 2020 – July 2020)

Associate Professor (with tenure, July 2015 – January 2020)

Assistant Professor (December 2010 – July 2015)

Lecturer (July 2006 – November 2010, elected: June 2005)

Postdoctoral Researcher (January 2002 – July 2006)

Adjunct Faculty Member (fall semesters 2004 and 2005)

*Institute for Theoretical Computer Science, Shanghai University of Finance and Economics, China*

Visiting Professor (August – September 2018, January 2019)

*Computer Science Department, Carnegie Mellon University, Pittsburgh (PA), USA*

Visiting Researcher (October 2012 – January 2013, October 2015 – February 2016)

*LAMSADE, Universite Paris-Dauphine, Paris, France*

Invited Professor (February & May – June 2015)

*Department of Computer Science, University of Salerno, Salerno, Italy*

Visiting Researcher (April 2014 – September 2014)

*Gran Sasso Science Institute, L'Aquila, Italy*

Visiting Researcher (September 2017)

*Computer Technology Institute and Press "Diophantus", Patras, Greece*

Research Associate of the Research Unit 1 on "Foundations of Computer Science, Relevant Technologies and Applications" and of the Strategy and Digital Educational Content Directorate (May 1996 – July 2020)

*Hellenic Open University, Greece*

Adjunct Faculty Member (September 2007 – July 2009, October 2017 – July 2020)

*Advanced Informatics Ltd., Patras, Greece*

Engineer/programmer (May 1996 – October 1997)

## *Teaching activities*

*Department of Computer Science, Aarhus University*

Course instructor:

- Algorithms, Incentives, and Data (new graduate course, fall semester, 2022 – today)
- Randomized Algorithms (graduate course, co-instructor, spring semester, 2021 – today)
- Fair division seminar as part of the pre-talent track activities (February 2021)

External examiner (Censor) in Computer Science BSc, MSc theses and projects in IT University of Copenhagen, University of Southern Denmark, and Aalborg University (since 2022)

*Department of Computer Engineering and Informatics, University of Patras*

Course instructor:

- Computational Complexity (core course, spring semester, 2012 – 2020)
- Economic Theory and Algorithms (elective, fall semester, 2013 – 2014, 2016 – 2020)
- Online Algorithms (new elective, spring semester, 2008 – 2015)
- Operating Systems I (core course, co-instructor, fall semester, 2013)
- Operating Systems Laboratory (core course/lab, co-instructor, spring semester, 2014)
- Communication Algorithms (elective, fall semester, 2004 – 2011)
- Parallel Algorithms (elective, spring semester, 2007)
- Strategic Aspects of Decision Making (new graduate course, MSc program "Data-Driven Computing and Decision-Making", spring semester, 2019 – 2020)
- Theory of Approximation Algorithms (graduate course, MSc program in "Computer Science and Technology", spring semester, 2013 – 2018)
- Advanced Online Algorithms (new graduate course, MSc program in "Computer Science and Technology", spring semester, 2008 – 2015)

Preparation of lecture notes (in greek) for the courses:

- Economic Theory and Algorithms
- Communication Algorithms
- Online Algorithms

*Hellenic Open University*

Instructor for the thematic unit "Foundations of Computer Science" (September 2007 – July 2009, October 2017 – July 2020). This is a year-long course and includes the material of three different typical semester-based courses, namely: Design and Analysis of Algorithms, Theory of Computation, and Computational Complexity

Preparation of "guidelines for study" for the (Greek version of the) textbooks:

- M. Sipser. Introduction to the theory of computation. 3rd edition, Cengage Learning, 2013.
- J. Kleinberg & E. Tardos. Algorithm design. Addison-Wesley, 2006.

### *Mentoring activities*

*Department of Computer Science, Aarhus University*

Supervision of undergraduate students:

- Pernille Brink Kær and Jonas Fridthiof Larsen. Fair division of indivisible items. CS BSc Thesis (February 2021 – June 2021)
- Jakob Bohnsen and Jens Christian Manfeldt. Theory and implementation of algorithms for envy-free distribution up to any item. CS BSc Thesis (February – June 2022)
- Peter Miltersen Sørensen, Algorithmic aspects of participatory budgeting. CS BSc Thesis (February 2023 – today)
- Nina Gad Lauritsen and Pi Marie Gregersen Bohlbro, Financial networks and systemic risk. CS BSc Thesis (February 2023 – today)

Supervision of graduate students (enrolled in the MSc program in Computer Science):

- Nicoleta-Tatiana Trifan. Participatory budgeting. CS MSc Thesis (February 2023 – today)

Supervision of graduate (PhD) students:

- Karl Ferhs, PhD student in Computational Social Choice (February 2021 – today)
- Zhile Jiang, PhD student in Algorithmic Game Theory (November 2021 – today)
- Sebastian Homrighausen, PhD student in Fair Division (January 2023 – today)
- Sudarshan Shyam, PhD student in Fair Division (January 2023 – today)

Supervision of postdocs:

- Nidhi Rathi, Postdoc (May 2021 – April 2023)
- Nicos Protopapas (February 2022 – today)

Visiting PhD/MSc students/postdocs hosted:

- Guillaume Meroue (intern, April – July 2022)
- Giovanna Varricchio (postdoc, May 2022)
- Samuel Coulomb (intern, February – June 2023)

*Department of Computer Engineering and Informatics, University of Patras*

Supervision of undergraduate students:

- Karolos-Evgenios Kantounis. Local search algorithms for combinatorial optimization problems. Diploma Thesis, October 2007
- Aris Filos-Ratsikas. Algorithmic techniques for improving the performance of congestion games. Diploma Thesis, July 2009
- Paraskevas Tyros. Computational aspects in social choice. Diploma Thesis, October 2009
- Christos Kalaitzis. Coordination mechanisms for congestion games. Diploma Thesis October 2010. Thesis work led to publications [C60] and [J31]
- Ioannis Katsikarelis. Algorithms and mechanisms for data routing in communication networks. Diploma Thesis, October 2011
- Panagiotis Georgiou. Fair division problems. Diploma Thesis, February 2012
- Nikos Protopapas. The role of information in social choice procedures. Diploma Thesis, October 2013
- Ioannis Katsidimas. Approximate mechanism design without money. Diploma Thesis, October 2013

- Marianna Panteli. Peer grading in massive open online courses. Diploma Thesis, July 2015. Thesis work led to a demo and short paper at the AAAI 2016 conference (see [C74])
- Panagiotis Patsilinakos. Computation of approximate pure Nash equilibria in congestion games. Diploma Thesis, September 2015
- Manolis Markou. Machine learning and voting. Diploma Thesis, March 2016
- Vasileios Koilias. The price of stability of network design games. Diploma Thesis. November 2016
- Paraskevi (Evi) Micha. Computational aspects of simple voting rules. Diploma Thesis, November 2016. Thesis work led to publication [C88]
- Ioannis Vrontakis. Algorithmic aspects of cooperative games. Diploma Thesis, November 2016
- Kiriaki (Ira) Giagkousi. Fair division problems for goods. Diploma Thesis, October 2017. Thesis work led to publication [C91]
- Panagiotis Tsamopoulos. Algorithmic learning aspects in economic problems. Diploma Thesis, March 2018
- Rafael Kalogeropoulos. Matching computations in kidney exchange. Diploma Thesis, November 2018
- Konstantinos Kanoutos. Fairness aspects in allocation problems with indivisible goods. Diploma Thesis, November 2018
- Konstantinos Symeou. Development of a rating application which uses ordinal peer grading. Diploma Thesis, January 2019
- Ioannis Konstantoulas. Efficient implementation of an algorithm for hypergraph transversal generation. Diploma Thesis, March 2019
- Sebastian Blocher. Influence spreading in social networks. Diploma Thesis, March 2019
- Philippos-Michael Moscholios. Matching computations with preferences. Diploma Thesis, June 2019
- Maria Kounalaki. Computational aspects of security games. Diploma Thesis, March 2020

Supervision of graduate students (enrolled in the MSc program in "Computer Science and Technology")

- Dimitris Kalaitzis. Computational aspects in approval elections. MSc Thesis, October 2010. Thesis work led to publication [C49]
- Aris Filos-Ratsikas. Approximate mechanism design without money. MSc Thesis, December 2011. Thesis work led to publications [C55] and [J34]
- Christos Kalaitzis. Efficient addressing and routing in large-scale communication networks. MSc Thesis, June 2012. Thesis work led to publications [C60] and [J36]
- Alexandros Andreas Voudouris. On the efficiency of divisible resource allocation mechanisms. MSc Thesis, December 2014. Thesis work led to publications [C68] and [J39]
- Nikos Protopapas. A study of the impact of competition on the complexity and quality of pricing. MSc Thesis, March 2016. Thesis work led to publications [C70] and [J42]
- Evanthia Tsitsoka. Deanonymization in social networks. MSc Thesis, September 2016. Thesis work led to publication [C97]
- Xenophon Chatzigeorgiou. Rank aggregation with incomplete preferences. MSc Thesis, December 2016. Thesis work led to publications [C84] and [J46]
- Paraskevi Micha. Computational aspects of liquid democracy. MSc Thesis, July 2018. Thesis work led to publication [C100]
- Stavros Ioannidis. Fair division of indivisible goods. MSc Thesis, June 2020. Thesis work led to publication [C105]

Supervision of graduate students (enrolled in the MSc program "Data-Driven Computing and Decision Making")

- Panagiotis Tsamopoulos. Game-theoretic aspects of regression analysis. MSc Thesis, July 2020
- Apostolos Kerentzis. Simple posted pricing mechanisms. MSc Thesis, July 2020

Supervision of graduate (PhD) students:

- Alexandros Andreas Voudouris. Design and analysis of algorithms for non-cooperative environments. PhD Thesis, University of Patras, September 2018. First position after PhD: postdoc at the University of Oxford. Currently: Lecturer at the University of Essex.
- Georgios Krimpas. Rank aggregation of partial rankings: algorithms and applications. PhD Thesis, University of Patras, December 2018. First position after PhD: software developer at the University of Patras

Visiting PhD students/postdocs hosted:

- Gianpiero Monaco (November 2007, May – August 2008). Collaboration led to publications [C38], [C50], [J23], and [J27].
- Angelo Fanelli (May – August 2008). Collaboration led to publications [C50] and [J27].
- Fidaa Abed (November 2013). Collaboration led to publications [C71] and [J43].
- Cosimo Vinci (May – July 2017). Collaboration led to publication [C90].
- Ekhine Irurozki (December 2018)

*Other mentoring activities*

Participation in several MSc/PhD thesis examination/consulting committees in Aarhus University, University of Patras, and elsewhere (Athens University of Economics and Business, Greece; National Technical University of Athens, Greece; Carnegie Mellon University, Pittsburgh, USA; University of L'Aquila, Italy; Gran Sasso Science Institute, L'Aquila, Italy; Indian Institute of Science, Bangalore, India; Nanyang Technological University, Singapore; University of Waterloo, Canada; Politecnico di Milano, Italy; University Paris-Dauphine, France)

## *Administrative and other professional activities*

*Department of Computer Science, Aarhus University*

Head of the Computational Complexity and Game Theory research group (June 2021 – today)

Member of the Research Committee of the Department (March 2021 – today)

Assessment Committee Chair for new tenure track faculty and associate professors (January – March 2021)

Assessment Committee Chair for a full professor position in Algorithmic Foundations for Machine Learning (September 2021 – January 2022)

Assessment Committee Chair for new tenure track faculty and associate professors (January – April 2022)

Assessment Committee Chair for an associate professor position in Computational Complexity (September – December 2022)

*Department of Computer Engineering and Informatics, University of Patras*

Director of the Division of Foundations and Applications of Computer Science (December 2017 – July 2020). In addition to coordinating and monitoring teaching activities related to courses offered by the Division, I have handled a promotion to the level of associate professor and a new hire of an assistant professor, and coordinated the establishment of three new laboratories and the reform of an existing one.

Member of the Board of Directors (December 2017 – July 2020). The BoD consists of the chair, the vice-chair, and the directors of the three divisions of the Department. It assists the chair of the Department in management, and reports to the General Assembly.

Deputy Director of the Special Inter-Departmental Committee of the graduate program in "Data-Driven Computing and Decision Making" (July 2018 – July 2020). Our department participates in the program together with the Department of Mathematics of the University of Patras. Activities include

the preparation of calls for student applications, monitoring of teaching activities, inviting and hosting visiting lecturers, interaction with the student representatives, and more.

Member of Department Committees on course transfers (chair, 2016 – 2020), PhD student admissions (2018 – 2020), CEID seminar & social hour (2018 – 2020), financial affairs (2013 – 2020), evaluation and selection of teaching faculty (academic years 2011–12, 2016–17), publicity and promotion (2010 – 2020), and health and safety (2006 – 2013)

Representative of the Department to the Hellenic National Academic Recognition Information Center (2010 – 2013)

Member of the Special Inter-University Committee of the graduate program in "Logic, Algorithms, and Computation" (2013 – 2018). Our department participated in the program together with the Departments of Mathematics, of Informatics and Telecommunications, and of Methodology, History, and Theory of Science from the University of Athens and the Schools of Applied Mathematical and Physical Sciences and of Electrical and Computer Engineering from the National Technical University of Athens.

Member of the Special Inter-Departmental Committee of the graduate program in "Mathematics of Computing and Decision Making" (2013 – 2017). Our department participated in the program together with the Department of Mathematics of the University of Patras.

*Other activities*

Member of a working group that prepared a report to the Government regarding the activities of computer and electronic engineers in Greece (April - June 2017), according to Article 29 of Law 4439/2016. The findings in the report are now part of Article 11 of the presidential decree 99/2018.

Member of a working group that will report to the Government regarding the professional activities of graduates from Technological Educational Institutes in Greece (responsible for activities related to computer science and engineering, November 2017 – May 2018)

Member of nineteen faculty hiring/promotion committees in Greek Universities (2016 - 2020)

## *Funded research projects/grants/networks*

EC-funded project TELEMATICS HC1003 "Biomedical Equipment Assessment and Management (BEAM II)" (May 1996 – September 1996, engineer)

EC-funded ESPRIT project 20899 "ANDF Technology in C for Reliable Safety-Critical Hard Real-Time Systems (OMI/ANTICRASH)" (May 1996 – October 1997, junior researcher/engineer)

EC-funded ESPRIT project 23920 "Safe Ada for Embedded Applications in Real Time (OMI/SAFE)" (March 1997 – October 1997, junior researcher/engineer)

EC-funded Brite-Euram project BE-3046 "Computer Experiments for Concurrent Engineering $(CE)^2$" (May 1997 – November 1999, junior researcher/engineer)

Basic research Project "Algorithms and Protocols for High-Performance Optical Networks", co-funded by the Greek General Secretariat for Research and Technology and the French Government in the context of PLATO cooperation between Greece and France (November 1997 – February 2000, junior researcher)

R&D project "ATM lab installation and operation", funded by the Greek Telecommunication Agency (October 1998 – March 2000, junior researcher/engineer)

EC-funded Growth project GRD1-2000-25724 "Time to Market Reduction via Statistical Information Management (TITOSIM)" (May 2001 – September 2002, junior researcher/engineer)

EC-funded IST FET project 1999-14186 "Algorithms and Complexity - Future Technologies (ALCOM-FT)" (June 2000 – November 2003, junior researcher)

EC-funded research training network HPRN-CT-1999-00112 "Approximation and Randomized Algorithms in Communication Networks (ARACNE)" (May 2000 – April 2004, junior researcher)

EC-funded IST FET project 2001-33135 "Critical Resource Sharing for Cooperation in Complex Systems

(CRESCCO)" (January 2002 – May 2005, budget: 1,517,000 euros[1], researcher and member of the coordinating team)

EC-funded COST Action 293 GRAAL "Graphs and Algorithms in Communication Networks" (September 2005 – October 2008, budget: ~400,000 euros, researcher)

Basic research project ΠΕΝΕΔ 2003 "Theoretical Analysis and Experimental Study of Algorithms for Energy-Efficient Communication in Ad Hoc Wireless Networks", funded by the Greek General Secretariat for Research and Technology (December 2005 – June 2009, budget: 106,000 euros, researcher)

EC-funded IST FET project IP-015964 "Algorithmic Principles for Building Efficient Overlay Computers (AEOLUS)" (September 2005 – February 2010, budget: 5,600,000 euros, researcher and member of the coordinating team). Activities included coordination of proposal preparation, negotiations with the European Commission before the start of the project, coordination of administrative and technical work, and reporting. AEOLUS was a huge Integrated Project (IP) with 21 partners

Basic research project "Algorithmic and game-theoretical approaches for efficient resource usage in communication networks", funded by the Caratheodory program of the University of Patras (May 2007 – April 2010, budget: 24,000 euros, principal investigator)

EC-funded COST Action IC0602 "Algorithmic Decision Theory" (July 2007 – May 2011, budget: ~513,000 euros, researcher and member of the management committee)

Research network "Algorithms and Games in Large-Scale Networks (ΑΛΓΟΠΑΙΓΝΙΟ)", funded by the University of Patras (November 2009 – April 2011, budget: 18,000 euros, researcher)

EC-funded FP7-ICT-258307 project EULER "Experimental Updateless Evolutive Routing" (October 2010 – August 2014, budget: 3,150,000 euros, researcher and team leader for CTI "Diophantus")

Basic research project "Algorithmic Game Theory", funded by the Greek General Secretariat for Research and Technology in the context of the program ΘΑΛΗΣ (October 2011 – November 2015, budget: 600,000 euros, researcher)

EC-funded COST Action IC1205 "Computational Social Choice" (July 2012 – November 2016, budget: ~600,000 euros, researcher and member of the management committee)

Basic research project "Strategic games as computing machines: design and analysis of algorithms for non-cooperative environments", funded by the Caratheodory program of the University of Patras (October 2014 – September 2017, budget: 33,000 euros, principal investigator)

EC-funded COST Action CA15210 "European Network for Collaboration on Kidney Exchange Programmes" (July 2016 – February 2021, indicative annual budget: ~130,000 euros, researcher and member of the management committee)

Research grant "Decision-making in multi-agent systems through argumentation framework and social choice theory", funded by the "Young Researchers" program of the Hellenic Operational Programme on Human Resources Development, Education and Lifelong Learning (November 2019 – September 2021, budget: 50,000 euros, co-PI)

EC-funded COST Action CA16228 "European Network for Game Theory" (August 2017 – today, indicative annual budget: ~130,000 euros, researcher and member of the management committee)

Independent Research Fund Denmark (DFF) grant "Conceptual and Computational Challenges in Fair Division" (July 2022 – today, budget: 5,750,000 DKK, principal investigator)

### *Research grant/project proposal evaluation*

Remote evaluator for ERC Starting Grant proposals (2022)

Evaluator for EIC Pathfinder Open program in Horizon Europe (2022 – today)

Evaluator of a research grant proposal submitted to Sapienza University of Rome (2021)

Evaluator of a grant submitted to the Faculty Development Scheme of the Research Grant Council of Hong Kong (2021)

[1] Where available, the budget information refers to the total funding of projects/grants.

Remote peer reviewer for the Centre of Excellence Programme 2022-29 of the Academy of Finland (2021)

Evaluator for the European IST/ICT-FET Open (Future and Emerging Technologies) programs in the context of FP6, FP7, and Horizon 2020 (2004 – 2020)

Evaluator for Global Challenges in Economics and Computation (GCEC) applications for funding from Facebook (2020)

External expert in the remote evaluation of proposals (COST Actions) to the COST Association (2017 – 2018)

Evaluator of proposals for the Individual Research Grants program of the Israel Science Foundation (2012, 2015, 2016, 2017)

Evaluator of research project proposals submitted to the program RESTART 2016-2020 of the Research Promotion Foundation of Cyprus (2019, 2021)

Evaluator of research proposals for the TOP Grant Modules 1 and 2 of the Netherlands Organization for Scientific Research-NWO (2013, 2016)

Evaluator of research proposals for the Innovational Research Incentives Scheme (Vidi/Vici grants) of the Netherlands Organisation for Scientific Research-NWO (2014, 2017)

Evaluator of a research proposal for the National Science Center (NCN), Poland (2015)

Evaluator of a proposal for an Erwin Schroedinger Fellowship for the Austrian Science Fund – FWF (2016)

External expert in the area of scientific research "Mathematical Sciences and Informatics", Operational Programme "Science and Education for Smart Growth", Republic of Bulgaria (2017)

Evaluator of research project proposals submitted to the program ΔΕΣΜΗ 2009-10 of the Research Promotion Foundation of Cyprus (2011)

Evaluator of research project proposals submitted to the basic research funding program of the National Technical University of Athens (2011)

Evaluator of proposals submitted to the Bilateral Cooperation program between Greece and Serbia of the Greek General Secretariat of Research and Technology (topic of expertise: Information and Communication Technologies, 2012)

Reviewer of a research project in the context of the program ΘΑΛΗΣ of the Greek General Secretariat for Research and Technology (2015)

Evaluator of research grant proposals submitted to the "Young Researchers" call of the Hellenic Operational Programme on Human Resources Development, Education and Lifelong Learning (2017)

Panel member and evaluator of proposals for R&D cooperation projects between academic and industry, submitted to the "Research-Create-Innovate" call of the Hellenic Operational Programme on Competitiveness, Entrepreneurship, and Innovation (2017, 2019)

### *Service to the community – conference committees*

14th International Colloquium on Structural Information and Communication Complexity (SIROCCO), Castiglioncello (LI), Italy, June 2007 (program committee member)

Europar – Parallel Processing 2008, Las Palmas de Gran Canaria, Spain, August 2008 (Topic 12: Theory and algorithms for parallel computation, vice-chair)

3rd Conference on Trustworthy Global Computing (TGC), Barcelona, Spain, November 2008 (PC member)

Euro-Par – Parallel Processing, 2008 – today (member of the Advisory Board)

17th Annual European Symposium on Algorithms (ESA), Design and Analysis Track, Copenhagen, Denmark, September 2009 (PC member)

2nd International Symposium on Algorithmic Game Theory (SAGT), Paphos, Cyprus, October 2009 (PC member)

6th International Workshop on Algorithmic Aspects of Wireless Sensor Networks (ALGOSENSORS), Bordeaux, France, July 2010 (PC member)

22nd International Joint Conference on Artificial Intelligence (IJCAI), Barcelona, Spain, July 2011 (PC member)

IJCAI Workshop on Social Choice and AI (WSCAI), Barcelona, Spain, July 2011 (PC member)

9th Workshop on Approximation and Online Algorithms (WAOA), Saarbrucken, Germany, September 2011 (PC member)

FET 11 Session on Computational Social Choice, Budapest, Hungary, May 2011 (organizer)

7th Workshop on Internet and Network Economics (WINE), Singapore, December 2011 (PC member)

11th International Symposium on Experimental Algorithms (SEA), Bordeaux, France, May 2012 (PC member)

11th International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS), Valencia, Spain, June 12 (PC member)

Europar – Parallel Processing 2012, Rhodes, Greece, August 2012 (workshops chair)

24th AAAI Conference on Artificial Intelligence (AAAI), Toronto, Canada, July 2012 (PC member)

13th ACM Conference on Electronic Commerce (EC), Valencia, Spain, June 2012 (PC member)

21st International Symposium on Mathematical Programming (ISMP), Berlin, Germany, August 2012 (organized a session on "Efficiency and optimization in games")

5th International Symposium on Algorithmic Game Theory (SAGT), Barcelona, Spain, October 2012 (PC member)

Euro-Par – Parallel Processing, 2012 – today (member of the Workshop Advisory Board)

40th International Colloquium on Automata, Languages, and Programming (ICALP), Riga, Latvia, July 2013 (PC member, Track C – Foundations of Networked Computation)

25th AAAI Conference on Artificial Intelligence (AAAI), Bellevue (WA), USA, July 2013 (PC member)

23rd International Joint Conference on Artificial Intelligence (IJCAI), Beijing, China, August 2013 (PC member)

38th Symposium on Mathematical Foundations of Computer Science (MFCS), Vienna, Austria, August 2013 (PC member)

6th International Symposium on Algorithmic Game Theory (SAGT), Aachen, Germany, October 2013 (PC member)

15th ACM Conference on Economics and Computation (EC), Stanford University, Palo Alto (CA), USA, June 2014 (PC member)

12nd Workshop on Approximation and Online Algorithms (WAOA 14), Wroclaw, Poland, September 2014 (PC member)

14th International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS), Istanbul, Turkey, May 2015 (PC member)

16th ACM Conference on Economics and Computation (EC), Portland (OR), USA, June 2015 (PC member)

11th Ad Auctions Workshop, Portland (OR), USA, June 2015 (PC member)

42nd International Colloquium on Automata, Languages, and Programming (ICALP), Kyoto, Japan, July 2015 (PC member, Track C – Foundations of Networked Computation)

24th International Joint Conference on Artificial Intelligence (IJCAI), Buenos Aires, Argentina, July 2015 (senior program committee member)

1st IJCAI Workshop on Algorithmic Game Theory (AGT@IJCAI), Buenos Aires, Argentina, July 2015 (PC member)

3rd Conference on Auctions, Market Mechanisms, and Their Applications (AMMA), Chicago (IL), USA, August 2015 (PC member)

4th International Conference on Algorithmic Decision Theory (ADT), Lexington (KY), USA, September 2015 (PC member)

11th Conference on Web and Internet Economics (WINE), Amsterdam, Netherlands, December 2015 (PC member)

6th International Workshop on Computational Social Choice (COMSOC), Toulouse, France, June 2016 (PC member)

25th International Joint Conference on Artificial Intelligence (IJCAI), New York, USA, July 2016 (SPC member)

2nd IJCAI Workshop on Algorithmic Game Theory (AGT@IJCAI), New York, USA, July 2016 (PC member)

17th ACM Conference on Economics and Computation (EC), Maastricht, Netherlands, July 2016 (PC member)

31st AAAI Conference on Artificial Intelligence (AAAI), San Francisco, USA, February 2017 (PC member)

26th International Joint Conference on Artificial Intelligence (IJCAI), Melbourne, Australia, August 2017 (SPC member)

10th International Symposium on Algorithmic Game Theory (SAGT), L'Aquila, Italy, September 2017 (PC member)

18th ACM Conference on Economics and Computation (EC), Cambridge (MA), USA, June 2017 (PC member)

3rd IJCAI Workshop on Algorithmic Game Theory (AGT@IJCAI), Melbourne, Australia, August 2017 (PC member)

32nd AAAI Conference on Artificial Intelligence (AAAI), New Orleans (LA), USA, February 2018 (PC member)

45th International Colloquium on Automata, Languages, and Programming (ICALP), Prague, Czech Republic, July 2018 (PC member, Track C – Foundations of Networked Computation)

19th ACM Conference on Economics and Computation (EC), Ithaca (NY), USA, June 2018 (SPC member, Artificial Intelligence and Applied Game Theory track)

27th International Joint Conference on Artificial Intelligence and 23rd European Conference on Artificial Intelligence (IJCAI-ECAI), Stockholm, Sweden, July 2018 (SPC member)

7th International Workshop on Computational Social Choice (COMSOC), Troy (NY), USA, June 2018 (PC member)

Joint AAMAS-IJCAI Workshop on Agents and Incentives in AI (AI^3), Stockholm, Sweden, July 2018 (PC member)

14th Conference on Web and Internet Economics (WINE), Oxford, United Kingdom, December 2018 (PC member)

33rd AAAI Conference on Artificial Intelligence (AAAI), Honolulu (HI), USA, January 2019 (PC member)

14th International Colloquium on Structural Information and Communication Complexity (SIROCCO), L'Aquila, Italy, June 2019 (PC member)

Workshop on the 20 years of the Price of Anarchy (20PoA), Chania, Greece, July 2019 (organizer)

28th International Joint Conference on Artificial Intelligence (IJCAI), Macau, China, August 2019 (SPC member)

AAMAS Workshop on Games, Agents & Incentives (GAIW), Montreal, Canada, May 2019 (PC member)

ICALP Workshop on Theoretical Aspects of Fairness, Patras, Greece, July 2019 (PC member)

20th ACM Conference on Economics and Computation (EC), Phoenix (AZ), USA, June 2019 (PC member, Theory track)

15th Workshop on Internet and Network Economics (WINE), New York, USA, December 2019 (program co-chair)

34th AAAI Conference on Artificial Intelligence (AAAI), New York, USA, February 2020 (SPC member)

21st ACM Conference on Economics and Computation (EC), virtual conference, July 2020 (PC member)

19th International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS), virtual conference, May 2020 (SPC member)

29th International Joint Conference on Artificial Intelligence (IJCAI), Yokohama, Japan, July 2020 (SPC member)

20th International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS), London, United Kingdom, May 2021 (SPC member)

35th AAAI Conference on Artificial Intelligence (AAAI), virtual conference, February 2021 (SPC member)

30th International Joint Conference on Artificial Intelligence (IJCAI), Montreal, Canada, August 2021 (SPC member)

8th International Workshop on Computational Social Choice (COMSOC), Haifa, Israel, June 2021 (PC member)

22nd ACM Conference on Economics and Computation (EC), Budapest, Hungary, July 2021 (PC member)

14th International Symposium on Algorithmic Game Theory (SAGT), Aarhus, Denmark, September/October 2021 (organizer and program co-chair)

17th Conference on Web and Internet Economics (WINE), December 2021 (senior PC member)

21st International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS), Auckland, New Zealand, May 2022 (area chair, area: markets, auctions, and non-cooperative game theory)

37th AAAI Conference on Artificial Intelligence (AAAI), Washington DC, USA, February 2023 (SPC member)

22nd International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS), London, UK, May 2023 (SPC member)

The 2023 ACM Web Conference (formerly known as WWW), Austin (TX, USA), May 2023 (PC member)

48th Symposium on Mathematical Foundations of Computer Science (MFCS), Bordeaux, France, August 2023 (PC member)

AAMAS 2023 Doctoral Consortium, London, UK, May 2023 (PC member)

24th ACM Conference on Economics and Computation (EC), London, UK, July 2023 (Area chair)

19th Conference on Web and Internet Economics (WINE), Shanghai, China, December 2023 (senior PC member)

38th AAAI Conference on Artificial Intelligence (AAAI), Vancouver, Canada, February 2024 (SPC member)

### *Service to the community – paper reviewing*

Reviewer for numerous conferences including[2]: Annual European Symposium on Algorithms (ESA 98, 02, 05, 06, 10, 12, 13), International Colloquium on Automata, Languages and Programming (ICALP 99, 01, 04, 08, 10, 11, 19, 22), International Colloquium on Structural Information & Communication Complexity (SIROCCO 97, 99, 02, 06, 09), International Workshop on Approximation Algorithms for Combinatorial Optimization Problems (APPROX 98), Annual ACM Symposium on Principles of Distributed Computing (PODC 2000), Symposium on Mathematical Foundations of Computer Science (MFCS 2009, 18), Euro-Par - Parallel Processing (2000, 03, 04, 06, 07), International Symposium on Distributed Computing (DISC 2000), International Symposium on Theoretical Aspects of Computer Science (STACS 2001, 02, 09, 12), IEEE INFOCOM 2001, Annual ACM Symposium on Parallel Algorithms and Architectures (SPAA 2001, 04, 05, 07, 10), IEEE International Communications Conference (ICC 2002), International Conference on Algorithms and Complexity (CIAC 2003, 06), International Parallel and Distributed Processing Symposium (IPDPS 2004, 06, 09), Workshop on Efficient and Experimental Algorithms (WEA 2004, 05, 06, 08), International Conference on Ad Hoc Networks and Wireless (ADHOC-NOW 2004, 07), International Workshop on Approximation and Online Algorithms (WAOA 2004, 05, 06, 07, 08, 09, 11), Annual ACM/SIAM Symposium on Discrete Algorithms (SODA 2006, 12, 13, 14, 18, 21, 23), International Workshop on Randomization and Computation (RANDOM 2006), FUN with Algorithms (FUN 2007), Symposium on Algorithmic Game Theory (SAGT 2014), Workshop on Internet and Network Economics (WINE 2010, 13), International Conference on Distributed Computing Systems (ICDCS 2010), Annual International Symposium on Algorithms and Computation (ISAAC 2011), Annual IEEE Symposium on Foundations of Computer Science (FOCS 2011, 21), Annual ACM Symposium on Theory of Computing (STOC 2014, 15, 16, 18).

Journal reviews for: Journal of the ACM, SIAM Journal on Computing, ACM Transactions on Algorithms, Journal of Computer and System Sciences, Games and Economic Behavior, ACM Transactions on Economics and Computation, Artificial Intelligence, Journal of Artificial Intelligence Research, Algorithmica, Communications of the ACM, Mathematics of Operations Research, Theoretical Computer Science, Mathematical Programming series B, Theory of Computing Systems, Theory of Computing, SIAM Journal on Discrete Mathematics, ACM Journal of Experimental Algorithmics, Distributed Computing, Journal of Combinatorial Optimization, Journal of Parallel and Distributed Computing, Computational Geometry: Theory and Applications, Networks, Journal of Autonomous Agents and Multi-Agent Systems, Discrete Applied Mathematics, Information Processing Letters, Parallel Processing Letters, Journal of Discrete Algorithms, Graphs and Combinatorics, IEEE

[2] The list does not include conferences in which I served as area chair or (senior) program committee member.

Communication Letters, IEEE Transactions on Mobile Computing, Discrete Mathematics, Discrete Mathematics & Theoretical Computer Science, IEEE/ACM Transactions on Networking, American Mathematical Monthly.

### *Invited talks*

On-line randomized call control in cellular networks. Dagstuhl Seminar on Approximation and Randomization Techniques in Communication Networks, Dagstuhl, Germany, June 2002.

Approximation algorithms for path coloring problems. Bertinoro Workshop on Algorithms for Scheduling and Communication, Bertinoro, Italy, June 2004.

Energy-efficient communication in ad hoc wireless networks. 20th International Symposium on Mathematical Programming, Chicago, IL, USA, August 2009.

Efficient coordination mechanisms for selfish scheduling. Workshop on Game-Theoretic Aspects of Distributed Computing, Elche/Elx, Spain, September 2009.

Efficient coordination mechanisms for selfish scheduling. Workshop on Advances in Algorithmic Game Theory, CWI Amsterdam, Netherlands, October 2010.

Computational challenges in fair division. FET 11: The European Future Technologies Conference and Exhibition, Session on Computational Social Choice, Budapest, Hungary, May 2011.

An incentive-compatible 2-agent kidney exchange mechanism. Dagstuhl Seminar on Computation and Incentives in Social Choice, Dagstuhl, Germany, March 2012.

Computing approximate pure Nash equilibria in congestion games. Summer School on Algorithmic Game Theory, Samos, Greece, July 2012.

Welfare and revenue guarantees in sponsored search auctions. 21st International Symposium on Mathematical Programming (ISMP), August 2012.

Computing approximate pure Nash equilibria in congestion games. 26th European Conference on Operational Research (EURO-INFORMS), Rome, Italy, July 2013.

Aggregating partial rankings with applications to peer grading in massive online open courses. Dagstuhl Seminar on Computational Social Choice: Theory and Applications, Dagstuhl, Germany, June 2015.

Fairness vs. Efficiency. COST Action IC1205 Summer School on Fair Division, Grenoble, France, July 2015.

Algorithmic challenges in ordinal peer grading. 2nd Workshop on Algorithmic Challenges of Big Data (ACBD), Dortmund, Germany, September 2015.

The unreasonable fairness of maximum Nash welfare. 2nd Algorithmic Game Theory Athens (AGaThA), Athens, Greece, July 2016.

Optimizing voting-like algorithms for peer grading and rating, FST&TCS Workshop on Computational Social Choice Theory, IIT Kanpur, India, December 2017.

The efficiency of resource allocation mechanisms for budget-constrained users, Workshop on Algorithmic Game Theory, Rome, Italy, March 2018.

The efficiency of resource allocation mechanisms for budget-constrained users. GAMENET Conference, Krakow, Poland, September 2018.

Fairness in allocation problems. Advanced Course on AI & Hellenic Artificial Intelligence Summer School, Chania, Greece, July 2019.

Impartial selection, additive approximation guarantees, and priors. Invited talk, 3rd Games, Agents, and Incentives Workshop (GAIW), May 2021.

Impartial selection, additive approximation guarantees, and priors. Invited talk, Summer School on Game Theory and Social Choice, City University of Hong Kong, June 2021.

New fairness concepts for allocating indivisible items. Invited talk, 15th International Symposium on Algorithmic Game Theory (SAGT), University of Essex, UK, September 2022.

Fairness in allocation problems (tutorial). Dagstuhl Seminar on Computational Social Dynamics, Dagstuhl, Germany, November 2022.

Computing better approximate pure Nash equilibria in cut games via semidefinite programming. Bellairs workshop on multi-agent systems, Barbados, March 2023.

New fairness concepts for allocating indivisible items. Workshop on Algorithms, Learning, and Games (ALGA), Punta Sampieri, Italy, June 2023.

### *Other selected talks (in universities, seminars, etc.)*

Geometric clustering to minimize the sum of cluster sizes. Department of Computer Science, University of L'Aquila, L'Aquila, Italy, May 2006.

Coping with selfishness: Taxes for linear atomic congestion games. Computer Science Department, Stanford University, Stanford (CA), USA, January 2008.

Efficient coordination mechanisms for selfish scheduling. Harvard University, School of Engineering and Applied Sciences, EconCS Seminar, Cambridge (MA), USA, June 2010.

On the efficiency of equilibria in generalized second price auctions. Division of Mathematical Sciences, School of Physical and Mathematical Sciences, Nanyang Technological University, Singapore, November 2010.

On the efficiency of equilibria in generalized second price auctions. Institute of Economics, Hungarian Academy of Sciences, Budapest, Hungary, May 2011.

Computing approximate pure Nash equilibria in congestion games. Theory Lunch, Computer Science Department, Carnegie Mellon University, Pittsburgh (PA), USA, November 2012.

Computing approximate pure Nash equilibria in congestion games. Discrete Mathematics and Optimization Seminar, School of Computer Science, McGill University, Montreal, Canada, January 2013.

When do noisy votes reveal the truth? Division of Mathematical Sciences, School of Physical and Mathematical Sciences, Nanyang Technological University, Singapore, March 2013.

When do noisy votes reveal the truth? Department of Computer Science, Aarhus University, Denmark, February 2014.

Analysis of generalized second price auctions. Mini-course, Gran Sasso Science Institute, L'Aquila, Italy, May 2014.

When do noisy votes reveal the truth? "Lucian Blaga" University of Sibiu, Romania, October 2014.

Aggregating partial rankings with applications to peer grading in massive online open courses. LAMSADE, University Paris-Dauphine, France, February 2015.

Computing approximate equilibria in constraint satisfaction games. LAMSADE, Universite Paris-Dauphine, France, June 2015.

When do noisy votes reveal the truth? LAMSADE, Universite Paris-Dauphine, France, June 2015.

Analysis of generalized second price auctions. Mini-course, LAMSADE, Universite Paris-Dauphine, France, June 2015.

Aggregating partial rankings with applications to peer grading in massive open online courses. Department of Computer Science and Engineering, Ohio State University, Columbus (OH), USA, December 2015.

Aggregating partial rankings with applications to peer grading in massive open online courses. Theory Lunch, Computer Science Department, Carnegie Mellon University, Pittsburgh (PA), USA, December 2015.

How effective can simple ordinal peer grading be? Department of Computer Science, University of Liverpool, UK, September 2016.

Fairness in allocation problems. CEID Seminar & Social Hour (inaugural talk), University of Patras, March 2018.

Fairness in allocation problems. Mini-course, Gran Sasso Science Institute, L'Aquila, Italy, July 2018.

Fairness in allocation problems. Institute for Theoretical Computer Science, Shanghai University of Finance and Economics, China, September 2018.

Fairness in allocation problems. Department of Mathematics, London School of Economics and Political Sciences, United Kingdom, November 2018.

Fairness in allocation problems. School of Computer Science and Electronics Engineering, University of Essex, United Kingdom, November 2018.

The efficiency of resource allocation mechanisms for budget-constrained users. Institute for Theoretical Computer Science, Shanghai University of Finance and Economics, China, January 2019.

Research problems at the interface of Computer Science and Economics. Department of Computer Science, Aarhus University, August 2019.

Impartial selection, additive approximation guarantees, and priors. Combinatorics Study Group Seminar, Queen Mary University of London, October 2020.

Impartial selection, additive approximation guarantees, and priors. Corelab Seminar, National Technical University of Athens, October 2020.

Impartial selection, additive approximation guarantees, and priors. Theory seminar, Purdue University, December 2020.

Impartial selection, additive approximation guarantees, and priors. CEID Seminar & Social Hour, University of Patras, April 2021.

Topics in computational social choice: voting, stable matchings, and fair division. CS Colloquium (inaugural lecture), Aarhus University, May 2021.

On interim envy-free allocation lotteries. DIREC Algorithms Workshop, Nyborg, September 2021.

The complexity of learning approval-based multi-winner voting rules. COMSOC Video Seminar, December 2021.

Relaxing the independence assumption in sequential posting pricing, prophet inequality, and random bipartite matching. Workshop on New Trends and Beyond Worst-case Analysis on Mechanism Design and Approximation Algorithms, National Technical University of Athens, February 2022.

New fairness concepts for allocating indivisible items. LAMSADE, University Paris-Dauphine, December 2022.

Computing better approximate pure Nash equilibria in cut games via semidefinite programming. Drexel University, May 2023.

Computing better approximate pure Nash equilibria in cut games via semidefinite programming. University of Southern Denmark, June 2023.

### *Memberships in scientific associations*

Association for Computing Machinery (ACM)

- Special Interest Group on Algorithms and Computation Theory – SIGACT (since 1999)
- Special Interest Group on Electronic Commerce – SIGECOM (since 2010)
- Special Interest Group on Artificial Intelligence – SIGAI (since 2010)

European Association for Theoretical Computer Science – EATCS (since 2000)

Association for the Advancement of Artificial Intelligence – AAAI (since 2010)

Technical Chambers of Greece (since 1997)

### *Personal information*

Birth date: October 7th, 1973

Married, two children

## Publications[3]

### *Journals*

[J1] I. Caragiannis, C. Kaklamanis, and P. Persiano. Symmetric communication in all-optical tree networks. *Parallel Processing Letters*, 10(4), pages 305-314, 2000.

[J2] V. Auletta, I. Caragiannis, L. Gargano, C. Kaklamanis, and P. Persiano. Sparse and limited wavelength conversion in all-optical tree networks. *Theoretical Computer Science*, 266 (1-2), pages 887-934, 2001. [SJR: Q2][4]

[J3] I. Caragiannis, C. Kaklamanis, and P. Persiano. Wavelength routing in all-optical tree networks: a survey. *Computers and Informatics* (formerly Computers and Artificial Intelligence), 20 (2), pages 95-120, 2001.

[J4] I. Caragiannis, C. Kaklamanis, and P. Persiano. Edge coloring of bipartite graphs with constraints. *Theoretical Computer Science*, 270 (1-2), pages 361-399, 2002. [SJR: Q2]

[J5] I. Caragiannis, C. Kaklamanis, and P. Kanellopoulos. New bounds on the size of feedback vertex set in meshes and butterflies. *Information Processing Letters*, 83 (5), pages 275-280, 2002. [SJR: Q2]

[J6] I. Caragiannis, C. Kaklamanis, and E. Papaioannou. Efficient on-line frequency allocation and call control in cellular networks. *Theory of Computing Systems*, 35 (5), pages 521-543, 2002. [SJR: Q1]

[J7] V. Auletta, I. Caragiannis, C. Kaklamanis, and P. Persiano. Randomized path coloring on binary trees. *Theoretical Computer Science*, 289 (1), pages 355-399, 2002. [SJR: Q2]

[J8] I. Caragiannis, C. Kaklamanis, and P. Kanellopoulos. A logarithmic approximation algorithm for the minimum energy consumption broadcast subgraph problem. *Information Processing Letters*, 86(3), pages 149-154, 2003. [SJR: Q2]

[J9] I. Caragiannis, A. Ferreira, C. Kaklamanis, S. Perennes, P. Persiano, and H. Rivano. Approximate constrained bipartite edge coloring. *Discrete Applied Mathematics*, 143(1-3), pages 54-61, 2004. [SJR: Q2]

[J10] I. Caragiannis, C. Kaklamanis, and P. Kanellopoulos. Energy-efficient wireless network design. *Theory of Computing Systems*, 39(5), pages 593-617, 2006. [SJR: Q2]

[J11] I. Caragiannis, A. V. Fishkin, C. Kaklamanis, and E. Papaioannou. Randomized online algorithms and lower bounds for computing large independent sets in disk graphs. *Discrete Applied Mathematics*, 155(2), pages 119-136, 2007. [SJR: Q2]

[J12] I. Caragiannis, A. V. Fishkin, C. Kaklamanis, and E. Papaioannou. A tight bound for online coloring of disk graphs. *Theoretical Computer Science*, 384(2-3), pages 152-160, 2007. [SJR: Q2]

[J13] I. Caragiannis, C. Kaklamanis, and E. Papaioannou. Competitive algorithms and lower bounds for online randomized call control in cellular networks. *Networks*, 52(4), pages 235-251, 2008. [SJR: Q1]

[J14] I. Caragiannis, C. Kaklamanis, P. Kanellopoulos, and E. Papaioannou. Scheduling to maximize participation. *Theoretical Computer Science*, 402 (2-3), pages 142-155, 2008. [SJR: Q1]

[J15] S. Athanassopoulos, I. Caragiannis, and C. Kaklamanis. Analysis of approximation algorithms for k-set cover using factor-revealing linear programs. *Theory of Computing Systems*, 45(3), pages 555-576, 2009. [SJR: Q2]

[J16] I. Caragiannis. Wavelength management in WDM rings to maximize the number of connections. *SIAM Journal on Discrete Mathematics*, 23 (2), pages 959-978, 2009. [SJR: Q1]

[J17] I. Caragiannis, A. Ferreira, C. Kaklamanis, S. Perennes, and H. Rivano. Fractional path coloring in bounded degree trees with applications. *Algorithmica*, 58(2), pages 516-540, 2010. [SJR: Q1]

[J18] I. Caragiannis, C. Kaklamanis, and P. Kanellopoulos. Taxes for linear atomic congestion games. *ACM Transactions on Algorithms*, 7(1), article 13, 2010. [SJR: Q1]

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[3] My publications have attracted more than 4630 citations according to Google Scholar (h-index = 38).

[4] Journal publications with a SCIMAGO journal ranking (SJR, https://www.scimagojr.com/) of Q1 or Q2 are indicated. Data are currently unavailable for journal publications in 2023 and later.

[J19] I. Caragiannis and A. D. Procaccia. Voting almost maximizes social welfare despite limited communication. *Artificial Intelligence*, 175 (9-10), pages 1655-1671, 2011. [SJR: Q1]

[J20] I. Caragiannis, M. Flammini, C. Kaklamanis, P. Kanellopoulos, and L. Moscardelli. Tight bounds for selfish and greedy load balancing. *Algorithmica*, 61 (3), pages 606-637, 2011. [SJR: Q1]

[J21] I. Caragiannis, C. Kaklamanis, P. Kanellopoulos, and M. Kyropoulou. The efficiency of fair division. *Theory of Computing Systems,* 50(4), pages 589-610, 2012. [SJR: Q2]

[J22] I. Caragiannis, J. A. Covey, M. Feldman, C. M. Homan, C. Kaklamanis, N. Karanikolas, A. D. Procaccia, and J. S. Rosenschein. On the approximability of Dodgson and Young elections. *Artificial Intelligence*, 187-188, pages 31-51, 2012. [SJR: Q1]

[J23] I. Caragiannis and G. Monaco. A 6/5-approximation algorithm for the maximum 3-cover problem. *Journal of Combinatorial Optimization*, 25(1), pages 60-77, 2013.

[J24] S. Athanassopoulos, I. Caragiannis, C. Kaklamanis, and E. Papaioannou. Energy-efficient communication in multi-interface wireless networks. *Theory of Computing Systems*, 52(2), pages 285-296, 2013. [SJR: Q2]

[J25] I. Caragiannis, C. Kaklamanis, and M. Kyropoulou. Tight approximation bounds for combinatorial frugal coverage algorithms. *Journal of Combinatorial Optimization,* 26(2), pages 292-309, 2013.

[J26] I. Caragiannis. Efficient coordination mechanisms for unrelated machine scheduling. *Algorithmica*, 66(3), pages 512-540, 2013. [SJR: Q1]

[J27] V. Bilo, I. Caragiannis, A. Fanelli, and G. Monaco. Improved lower bounds on the price of stability of undirected network design games. *Theory of Computing Systems,* 52(4), pages 668-686, 2013. [SJR: Q2]

[J28] I. Caragiannis, M. Flammini, and L. Moscardelli. An exponential improvement on the MST heuristic for minimum energy broadcasting in ad hoc wireless networks. *IEEE/ACM Transactions on Networking*, 21(4), pages 1322-1331, 2013. [SJR: Q1]

[J29] I. Caragiannis, C. Kaklamanis, N. Karanikolas, and A. D. Procaccia. Socially desirable approximations for Dodgson's voting rule. *ACM Transactions on Algorithms*, 10(2), article 6, 2014. [SJR: Q1]

[J30] I. Caragiannis, C. Kaklamanis, P. Kanellopoulos, and M. Kyropoulou. Revenue guarantees in the generalized second price auction. *ACM Transactions on Internet Technology*, 14(2-3), article 17, 2014. [SJR: Q2]

[J31] J. Augustine, I. Caragiannis, A. Fanelli, and C. Kalaitzis. Enforcing efficient equilibria in network design games via subsidies. *Algorithmica*, 72 (1), pages 44-82, 2015. [SJR: Q1]

[J32] I. Caragiannis, C. Kaklamanis, P. Kanellopoulos, M. Kyropoulou, B. Lucier, R. Paes Leme, and E. Tardos. Bounding the inefficiency of outcomes in generalized second price auctions. *Journal of Economic Theory*, 156, pages 343-388, 2015. [SJR: Q1]

[J33] I. Caragiannis, A. Fanelli, N. Gravin, and A. Skopalik. Approximate pure Nash equilibria in weighted congestion games: existence, efficient computation, and structure. *ACM Transactions on Economics and Computation*, 3(1), article 2, 2015. [SJR: Q1]

[J34] I. Caragiannis, A. Filos-Ratsikas, and A. D. Procaccia. An improved 2-agent kidney exchange mechanism. *Theoretical Computer Science*, 589, pages 53-60, 2015. [SJR: Q2]

[J35] C. Boutilier, I. Caragiannis, S. Haber, T. Lu, A. D. Procaccia, and O. Sheffet. Optimal social choice functions: a utilitarian view. *Artificial Intelligence*, 227, pages 190-213, 2015. [SJR: Q1][5]

[J36] I. Caragiannis and C. Kalaitzis. Space lower bounds for low-stretch greedy embeddings. *Theoretical Computer Science,* 610, pages 149-157, 2016. [SJR: Q2]

[J37] I. Caragiannis, A. D. Procaccia, and N. Shah. When do noisy votes reveal the truth? *ACM Transactions on Economics and Computation*, 4(3), article 15, 2016.

[J38] I. Caragiannis, C. Kaklamanis, and M. Kyropoulou. Limitations of deterministic auction design for correlated bidders. *ACM Transactions on Computation Theory*, 8(4), article 13, 2016. [SJR: Q1]

[5] [J35] received the 2022 AIJ Prominent Paper Award.

[J39] I. Caragiannis and A. A. Voudouris. Welfare guarantees for proportional allocations. *Theory of Computing Systems*, 59(4), pages 581-599, 2016. [SJR: Q2]

[J40] I. Caragiannis, A. Fanelli, and N. Gravin. Short sequences of improvement moves lead to approximate equilibria in constraint satisfaction games. *Algorithmica*, 77(4), pages 1143-1158, 2017. [SJR: Q1]

[J41] I. Caragiannis, S. Nath, A. D. Procaccia, and N. Shah. Subset selection via implicit utilitarian voting. *Journal of Artificial Intelligence Research*, 58, pages 123-152, 2017. [SJR: Q2]

[J42] I. Caragiannis, X. Chatzigeorgiou, P. Kanellopoulos, G. A. Krimpas, N. Protopapas, and A. A. Voudouris. Efficiency and complexity of price competition among single-product vendors. *Artificial Intelligence*, 248, pages 9-25, 2017. [SJR: Q1]

[J43] F. Abed, I. Caragiannis, and A. A. Voudouris. Near-optimal asymmetric binary matrix partitions. *Algorithmica*, 80 (1), pages 48-72, 2018. [SJR: Q1]

[J44] I. Caragiannis and A. Fanelli. An almost ideal coordination mechanism for unrelated machine scheduling. *Theory of Computing Systems*, 63(1), pages 114-127, 2019. [SJR: Q2]

[J45] I. Caragiannis, D. Kurokawa, H. Moulin, A. D. Procaccia, N. Shah, and J. Wang. The unreasonable fairness of the maximin Nash welfare. *ACM Transactions on Economics and Computation*, 7(6), article 12, 2019. [SJR: Q2]

[J46] I. Caragiannis, X. Chatzigeorgiou, G. A. Krimpas, and A. A. Voudouris. Optimizing positional scoring rules for rank aggregation. *Artificial Intelligence*, 267, pages 58-77, 2019. [SJR: Q1]

[J47] I. Caragiannis, G. A. Krimpas, and A. A. Voudouris. How effective can simple ordinal peer grading be? *ACM Transactions on Economics and Computation*, 8(3), article 16, 2020. [SJR: Q2]

[J48] I. Caragiannis and A. Fanelli. On approximate pure Nash equilibria in weighted congestion games with polynomial latencies. *Journal of Computer and System Sciences*, 117, pages 40-48, 2021. [SJR: Q2]

[J49] I. Caragiannis, A. Filos-Ratsikas, P. Kanellopoulos, and R. Vaish. Stable fractional matchings. *Artificial Intelligence*, 295, 103416, 2021. [SJR: Q1]

[J50] I. Caragiannis and A. A. Voudouris. The efficiency of resource allocation mechanisms for budget-constrained users. *Mathematics of Operations Research*, 46(2), pages 503-523, 2021. [SJR: Q1]

[J51] I. Caragiannis, C. Kaklamanis, N. Karanikolas, and G. A. Krimpas. Evaluating approval-based multiwinner voting in terms of robustness to noise. *Autonomous Agents and Multiagent Systems*, 36(1), article 1, 2022. [SJR: Q2]

[J52] H. Aziz, I. Caragiannis, A. Igarashi, and T. Walsh. Fair allocation of combinations of indivisible goods and chores. *Autonomous Agents and Multi-Agent Systems*, 36(1), article 3, 2022. [SJR: Q2]

[J53] V. Bilo, I. Caragiannis, M. Flammini, A. Igarashi, G. Monaco, D. Peters, C. Vinci, and W. Zwicker. Almost envy-free allocations with connected bundles. *Games and Economic Behavior*, 131, pages 197-221, 2022. [SJR: Q1]

[J54] I. Caragiannis, P. Kanellopoulos, and A. A. Voudouris. Bounding the inefficiency of compromise in opinion formation. *Algorithmica*, 84, pages 234-271, 2022. [SJR: Q1]

[J55] I. Caragiannis, G. Christodoulou, and N. Protopapas. Impartial selection with additive approximation guarantees. *Theory of Computing Systems*, 66(3), pages 721-742, 2022. [SJR: Q2]

[J56] I. Caragiannis, N. Shah, and A. A. Voudouris. The metric distortion of multiwinner voting. *Artificial Intelligence*, 313: 103802, 2022. [SJR: Q1]

[J57] I. Caragiannis, A. Filos-Ratsikas, S. Nath, and A. A. Voudouris. Truthful ownership transfer with expert advice. *Mathematical Programming B*, forthcoming.

[J58] S. Airiau, H. Aziz, I. Caragiannis, J. Kruger, J. Lang, and D. Peters. Portioning using ordinal preferences: fairness and efficiency. *Artificial Intelligence*, 314: 103809, 2023. [SJR: Q1]

[J59] I. Caragiannis, A. Filos-Ratsikas, S. K. S. Frederiksen, K. A. Hansen, and Z. Tan. Truthful facility assignment with resource augmentation: An exact analysis of serial dictatorship. *Mathematical Programming B*, forthcoming.

### *Book chapters and surveys*

[B1] V. Auletta, I. Caragiannis, C. Kaklamanis, and P. Persiano. Efficient wavelength routing in trees with low-degree converters. Chapter in *Multichannel Optical Networks: Theory and Practice*, P.-J. Wan, D.-Z. Du, and P. M. Pardalos (eds.), DIMACS Series in Discrete Mathematics and Computer Science, American Mathematical Society, 46, pages 1-14, 1998.

[B2] I. Caragiannis, C. Kaklamanis, P. Persiano. Approximation algorithms for path coloring in rrees. Chapter in *Efficient Approximation and On-line Algorithms*, E. Bampis, K. Jansen, and C. Kenyon (eds.), LNCS 3484, Springer, pages 74-96, 2005.

[B3] I. Caragiannis, C. Kaklamanis, and E. Papaioannou. Online call admission control in wireless cellular networks. Chapter in *Handbook of Parallel Computing: Models, Algorithms, and Applications*, S. Rajasekaran and J. Reif (eds.), Chapman & Hall/CRC Computer & Information Science Series, pages 38:1-20, 2007.

[B4] I. Caragiannis, C. Kaklamanis, and P. Kanellopoulos. Minimum energy communication in ad hoc wireless networks: a survey. Chapter in *Handbook of Parallel Computing: Models, Algorithms, and Applications*, S. Rajasekaran and J. Reif (eds.), Chapman & Hall/CRC Computer & Information Science Series, pages 39:1-20, 2007.

[B5] V. Bilo, I. Caragiannis, A. Fanelli, M. Flammini, C. Kaklamanis, G. Monaco, and L. Moscardelli. Game-theoretic approaches to optimization problems in communication networks. Chapter in *Graphs and Algorithms in Communication Networks*, A. M. C. Koster and Z. Munioz (eds.), Springer, pages 241-263, 2009.

[B6] A. Navarra, I. Caragiannis, M. Flammini, C. Kaklamanis, and R. Klasing. Energy consumption minimization in ad hoc wireless, and multi-interface networks. Chapter in *Graphs and Algorithms in Communication Networks*, A. M. C. Koster and Z. Munioz (eds.), Springer, pages 335-355, 2009.

[B7] I. Caragiannis, A. Fanelli, N. Gravin, and A. Skopalik. Computing approximate pure Nash equilibria in congestion games. *SIGecom Exchanges*, 11(1), pages 26-29, 2012.

[B8] I. Caragiannis, E. Hemaspaandra, and L. Hemaspaandra. Dodgson's and Young's rule. Chapter in *Handbook of Computational Social Choice*, F. Brandt, V. Conitzer, U. Endriss, J. Lang, and A. Procaccia (eds.), Cambridge University Press, pages 103-126, 2016.

[B9] I. Caragiannis. Recent advances in large-scale peer grading. Chapter in *Trends in Computational Social Choice*, U. Endriss (ed.), AI Access, pages 327-344, 2017.

### *Edited volumes*

[V1] I. Caragiannis, M. Alexander, R. M. Badia, M. Cannataro, A. Costan, M. Danelutto, F. Desprez, B. Krammer, J. Sahuquillo, S. L. Scott, and J. Weidendorfer, editors. *Euro-Par 2012: Parallel Processing Workshops*, LNCS 7640, Springer, 2013.

[V2] I. Caragiannis, V. Mirrokni, and E. Nikolova, editors. *Proceedings of the 15th Conference on Web and Internet Economics* (*WINE*), LNCS 11920, Springer, 2019.

[V3] I. Caragiannis and K. A. Hansen, editors. *Proceedings of the 14th International Symposium on Algorithmic Game Theory* (*SAGT*), LNCS 12885, Springer, 2021.

### *Conference proceedings*

[C1] I. Caragiannis, C. Kaklamanis, and P. Persiano. Bounds on optical bandwidth allocation on directed fiber tree topologies. In *Proceedings of the 2nd Workshop on Optics & Computer Science* (satellite workshop of *IPPS 97*), 1997.

[C2] V. Auletta, I. Caragiannis, C. Kaklamanis, and P. Persiano. Bandwidth allocation algorithms for tree-shaped optical networks with wavelength converters, In *Proceedings of the 4th International Colloquium on Structural Information and Communication Complexity (SIROCCO)*, pages 24-39, 1997.

[C3] V. C. Gerogiannis, I. E. Caragiannis, and M. A. Tsoukarellas. A general framework for applying safety analysis to safety critical real-time applications using fault trees. In *Proceedings of the 9th EUROMICRO Workshop on Real Time Systems (EURO-RTS)*, pages 153-160, 1997.

[C4] V. Auletta, I. Caragiannis, C. Kaklamanis, and P. Persiano. On the complexity of wavelength converters. In *Proceedings of the 23rd International Symposium on Mathematical Foundations of Computer Science (MFCS)*, LNCS 1450, Springer, pages 771-779, 1998. [CORE: A][6]

[C5] I. Caragiannis, C. Kaklamanis, and P. Persiano. Wavelength routing of symmetric communication requests in directed fiber trees. In *Proceedings of the 5th International Colloquium on Structural Information and Communication Complexity (SIROCCO)*, pages 10-19, 1998.

[C6] I. Caragiannis, C. Kaklamanis, and P. Persiano. Edge coloring of bipartite graphs with constraints, In *Proceedings of the 24th International Symposium on Mathematical Foundations of Computer Science (MFCS)*, LNCS 1672, Springer, pages 376-386, 1999. [CORE: A]

[C7] A. Bouganis, I. Caragiannis, and C. Kaklamanis. Implementation issues and experimental study of a wavelength routing algorithm for irregular all-optical networks. In *Proceedings of the 3rd Workshop on Algorithm Engineering (WAE)*, LNCS 1668, Springer, pages 258-270, 1999.

[C8] I. Caragiannis, C. Kaklamanis, and E. Papaioannou. Efficient on-line communication in cellular networks. In *Proceedings of the 12th Annual ACM Symposium on Parallel Algorithms and Architectures (SPAA)*, pages 46-53, 2000. [CORE: A]

[C9] C. Bartzis, I. Caragiannis, C. Kaklamanis, and I. Vergados. Experimental evaluation of hot-potato routing algorithms on 2-dimensional processors arrays. In *Proceedings of Euro-Par 2000 – Parallel Processing*, LNCS 1900, Springer, pages 877-881, 2000. [CORE: A]

[C10] V. Auletta, I. Caragiannis, C. Kaklamanis, and P. Persiano. Randomized path coloring on binary trees. In *Proceedings of the 3rd International Workshop on Approximation Algorithms for Combinatorial Optimization Problems (APPROX)*, LNCS 1913, Springer, pages 60-71, 2000. [CORE: A]

[C11] I. Caragiannis, C. Kaklamanis, and I. Vergados. Greedy dynamic hot-potato routing on arrays. In *Proceedings of the 2000 International Symposium on Parallel Algorithms and Networks (I-SPAN)*, pages 178-185, 2000.

[C12] I. Caragiannis, C. Kaklamanis, and E. Papaioannou. Competitive analysis of on-line randomized call control in cellular networks. In *Proceedings of the 15th International Parallel and Distributed Processing Symposium (IPDPS)*, 2001. [CORE: A]

[C13] I. Caragiannis, A. Ferreira, C. Kaklamanis, S. Perennes, and H. Rivano. Fractional path coloring with applications to WDM networks. In *Proceedings of the 28th International Colloquium on Automata, Languages, and Programming (ICALP)*, LNCS 2076, Springer, pages 732-743, 2001. [CORE: A]

[C14] I. Caragiannis, A. Ferreira, C. Kaklamanis, S. Perennes, P. Persiano, and H. Rivano. Approximate constrained bipartite edge coloring. In *Proceedings of the 27th International Workshop on Graph-Theoretic Concepts in Computer Science (WG)*, LNCS 2204, Springer, pages 21-31, 2001. [CORE: A]

[C15] I. Caragiannis, C. Kaklamanis, and P. Kanellopoulos. New bounds on the size of feedback vertex set in meshes and butterflies. In *Proceedings of the 8th International Colloquium on Structural Information and Communication Complexity (SIROCCO)*, pages 77-88, 2001.

[C16] I. Caragiannis, C. Kaklamanis, and E. Papaioannou. Randomized call control in sparse wireless cellular networks. In *Proceedings of the 8th International Conference on Advances in Communication and Control (COMCON)*, pages 73-82, 2001.

[C17] I. Caragiannis, C. Kaklamanis, and P. Kanellopoulos. New results for energy-efficient broadcasting in wireless networks. In *Proceedings of the 13th Annual International Symposium on Algorithms and Computation (ISAAC)*, LNCS 2518, Springer, pages 332-343, 2002. [CORE: A][7]

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[6] Conference publications with a CORE ranking (http://portal.core.edu.au/conf-ranks/) of A* or A are indicated.

[7] [C17] was invited to the special issue of *Theory of Computing Systems* with the best papers from *ISAAC 02* (declined).

[C18] I. Caragiannis, C. Kaklamanis, and P. Kanellopoulos. Energy-efficient wireless network design. In *Proceedings of the 14th Annual International Symposium on Algorithms and Computation (ISAAC)*, LNCS 2906, Springer, pages 585-594, 2003. [CORE: A]

[C19] I. Caragiannis, C. Kaklamanis, P. Persiano, and A. Sidiropoulos. Fractional and integral coloring of locally-symmetric sets of paths on binary trees. In *Proceedings of the 1st Workshop on Approximation and On-line Algorithms (WAOA)*, LNCS 2909, Springer, pages 81-94, 2003.

[C20] I. Caragiannis, C. Kaklamanis, and E. Papaioannou. Simple on-line algorithms for call control in cellular networks. In *Proceedings of the 1st Workshop on Approximation and On-line Algorithms (WAOA)*, LNCS 2909, Springer, pages 67-80, 2003.

[C21] I. Caragiannis, C. Kaklamanis, and P. Kanellopoulos. Power consumption problems in ad hoc wireless networks. In *Proceedings of the 1st Workshop on Approximation and On-line Algorithms (WAOA)*, LNCS 2909, Springer, pages 252-255, 2003.

[C22] I. Caragiannis and C. Kaklamanis. Approximate Path coloring with applications to wavelength assignment in WDM optical networks. In *Proceedings of the 21st International Symposium on Theoretical Aspects of Computer Science (STACS)*, LNCS 2996, Springer, pages 258-269, 2004. [CORE: A]

[C23] S. Athanassopoulos, I. Caragiannis, and C. Kaklamanis, P. Kanellopoulos. Experimental comparison of algorithms for energy-efficient multicasting in ad hoc networks. In *Proceedings of the 3rd International Conference on Ad Hoc Networks and Wireless (ADHOC-NOW)*, LNCS 3158, Springer, pages 183-196, 2004.

[C24] I. Caragiannis, A. Fishkin, C. Kaklamanis, and E. Papaioannou. On-line algorithms for disk graphs. In *Proceedings of the 29th International Symposium on Mathematical Foundations of Computer Science (MFCS)*, LNCS 3153, Springer, pages 215-226, 2004. [CORE: A][8]

[C25] I. Caragiannis, A.V. Fishkin, C. Kaklamanis, and E. Papaioannou. A tight bound for online coloring of disk graphs. In *Proceedings of the 12th International Colloquium on Structural Information and Communication Complexity (SIROCCO)*, LNCS 3499, Springer, pages 78-88, 2005.[9]

[C26] I. Caragiannis, C. Kaklamanis, and E. Papaioannou. New bounds on the competitiveness of randomized online call control in cellular networks. In *Proceedings of Euro-Par 2005 – Parallel Processing,* LNCS 3648, Springer, pages 1089-1099, 2005. [CORE: A]

[C27] V. Bilo, I. Caragiannis, C. Kaklamanis, and P. Kanellopoulos. Geometric clustering to minimize the sum of cluster sizes. In *Proceedings of the 13th Annual European Symposium on Algorithms* (*ESA*), LNCS 3669, Springer, pages 460-471, 2005. [CORE: A]

[C28] I. Caragiannis, C. Galdi, and C. Kaklamanis. Network load games. In *Proceedings of the 16th Annual International Symposium on Algorithms and Computation (ISAAC)*, LNCS 3827, Springer, pages 809-818, 2005. [CORE: A]

[C29] I. Caragiannis, C. Galdi, and C. Kaklamanis. Basic computations in wireless networks. In *Proceedings of the 16th Annual International Symposium on Algorithms and Computation (ISAAC)*, LNCS 3827, Springer, pages 533-542, 2005. [CORE: A]

[C30] I. Caragiannis, M. Flammini, C. Kaklamanis, P. Kanellopoulos, and L. Moscardelli. Tight bounds for selfish and greedy load balancing. In *Proceedings of the 33rd International Colloquium on Automata, Languages, and Programming (ICALP)*, LNCS 4051, Part I, Springer, pages 311-322, 2006. [CORE: A]

[C31] I. Caragiannis, C. Kaklamanis, and P. Kanellopoulos. Taxes for linear atomic congestion games. In *Proceedings of the 14th Annual European Symposium on Algorithms* (*ESA*), LNCS 4168, Springer, pages 184-195, 2006. [CORE: A]

[C32] I. Caragiannis, C. Kaklamanis, P. Kanellopoulos, and E. Papaioannou. Scheduling to maximize participation. In *Proceedings of the 2nd Symposium on Trustworthy Global Computing (TGC)*, LNCS 4661, Springer, pages 218-232, 2007.[10]

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8 [C24] was invited to the special issue of *Discrete Applied Mathematics* with the best papers from *MFCS 04* (see [J11]).

9 [C25] was invited to the special issue of *Theoretical Computer Science* with the best papers from *SIROCCO 05* (see [J12]).

10 [C32] was invited to the special issue of *Theoretical Computer Science* with the best papers from *TGC 06* (see [J14]).

[C33] I. Caragiannis. Wavelength management in WDM rings to maximize the number of connections. In *Proceedings of the 24th International Symposium on Theoretical Aspects of Computer Science (STACS)*, LNCS 4393, Springer, pages 61-72, 2007. [CORE: A][11]

[C34] I. Caragiannis, M. Flammini, and L. Moscardelli. An exponential improvement on the MST heuristic for minimum energy broadcasting in ad hoc wireless networks. In *Proceedings of the 34th International Colloquium on Automata, Languages, and Programming (ICALP)*, LNCS 4596, Springer, pages 447-458, 2007. [CORE: A]

[C35] S. Athanassopoulos, I. Caragiannis, and C. Kaklamanis. Analysis of approximation algorithms for k-set cover using factor-revealing linear programs. In *Proceedings of the 16th International Symposium on Fundamentals of Computation Theory (FCT)*, LNCS 4639, Springer, pages 52-63, 2007. [CORE: A]

[C36] I. Caragiannis. Better bounds for online load balancing on unrelated machines. In *Proceedings of the 19th Annual ACM-SIAM Symposium on Discrete Algorithms (SODA)*, pages 972-981, 2008. [CORE: A*]

[C37] I. Caragiannis, C. Kaklamanis, E. Kranakis, D. Krizanc, and A. Wiese. Communication in wireless networks with directional antennas. In *Proceedings of the 20th Annual ACM Symposium on Parallelism in Algorithms and Architectures* (*SPAA*), pages 344- 351, 2008. [CORE: A]

[C38] I. Caragiannis and G. Monaco. A 6/5-approximation algorithm for the maximum 3-cover problem. In *Proceedings of the 33rd International Symposium on Mathematical Foundations of Computer Science (MFCS)*, LNCS 5162, Springer, pages 205-216, 2008. [CORE: A]

[C39] I. Caragiannis, C. Kaklamanis, and P. Kanellopoulos. Improving the efficiency of load balancing games through taxes. In *Proceedings of the 4th International Workshop on Internet and Network Economics (WINE)*, LNCS 5385, Springer, pages 374-385, 2008.

[C40] I. Caragiannis. Efficient coordination mechanisms for unrelated machine scheduling. In *Proceedings of the 20th Annual ACM-SIAM Symposium on Discrete Algorithms (SODA)*, pages 815-824, 2009. [CORE: A*]

[C41] I. Caragiannis, J. A. Covey, M. Feldman, C. M. Homan, C. Kaklamanis, N. Karanikolas, A. D. Procaccia, and J. S. Rosenschein. On the approximability of Dodgson and Young elections. In *Proceedings of the 20th Annual ACM-SIAM Symposium on Discrete Algorithms (SODA)*, pages 1058-1067, 2009. [CORE: A*]

[C42] S. Athanassopoulos, I. Caragiannis, C. Kaklamanis, and E. Papaioannou. Energy-efficient communication in multi-interface wireless networks. In *Proceedings of the 34th International Symposium on Mathematical Foundations of Computer Science (MFCS)*, LNCS 5734, Springer, pages 102-111, 2009. [CORE: A]

[C43] S. Athanassopoulos, I. Caragiannis, C. Kaklamanis, and M. Kyropoulou. An improved approximation bound for spanning star forest and color saving. In *Proceedings of the 34th International Symposium on Mathematical Foundations of Computer Science (MFCS)*, LNCS 5734 , Springer, pages 90-101, 2009. [CORE: A]

[C44] I. Caragiannis, C. Kaklamanis, P. Kanellopoulos, and M. Kyropoulou. On low-envy truthful allocations. In *Proceedings of the 1st International Conference on Algorithmic Decision Theory* (*ADT*), LNCS 5783, Springer, pages 111-119, 2009.

[C45] I. Caragiannis, C. Kaklamanis, P. Kanellopoulos, and M. Kyropoulou. The efficiency of fair division. In *Proceedings of the 5th International Workshop on Internet and Network Economics (WINE)*, LNCS 5929, Springer, pages 475-482, 2009.

[C46] I. Caragiannis, C. Kaklamanis, P. Kanellopoulos, M. Kyropoulou, and E. Papaioannou. The impact of altruism on the efficiency of atomic congestion games. In *Proceedings of the 5th Symposium on Trustworthy Global Computing (TGC)*, LNCS 6084, Springer, pages 172-188, 2010.

[C47] I. Caragiannis, C. Kaklamanis, N. Karanikolas, and A. D. Procaccia. Socially desirable approximations for Dodgson's voting rule. In *Proceedings of the 11th ACM Conference on Electronic Commerce (EC)*, pages 253-262, 2010. [CORE: A*]

[11] [C33] was invited to the special issue of *Theory of Computing Systems* with the best papers from *STACS 07* (declined).

[C48] I. Caragiannis, D. Kalaitzis, and E. Markakis. Approximation algorithms and mechanism design for minimax approval voting. In *Proceedings of the 24th AAAI Conference on Artificial Intelligence (AAAI)*, pages 737-742, 2010. [CORE: A*]

[C49] I. Caragiannis and A. D. Procaccia. Voting almost maximizes social welfare despite limited communication. In *Proceedings of the 24th AAAI Conference on Artificial Intelligence (AAAI)*, pages 743-748, 2010. [CORE: A*]

[C50] V. Bilo, I. Caragiannis, A. Fanelli, and G. Monaco. Improved lower bounds on the price of stability of undirected network design games. In *Proceedings of the 3rd International Symposium on Algorithmic Game Theory (SAGT)*, LNCS 6386, Springer, pages 90-101, 2010.

[C51] I. Caragiannis, C. Kaklamanis, and M. Kyropoulou. Tight approximation bounds for greedy frugal coverage algorithms. In *Proceedings of the 5th International Frontiers of Algorithmics Workshop (FAW) and the 7th International Conference on Algorithmic Aspects of Information and Management (AAIM)*, LNCS 6681, Springer, pages 185-195, 2011.[12]

[C52] I. Caragiannis, C. Kaklamanis, P. Kanellopoulos, and M. Kyropoulou. On the efficiency of equilibria in generalized second price auctions. In *Proceedings of the 12th ACM Conference on Electronic Commerce (EC)*, pages 81-90, 2011. [CORE: A*][13]

[C53] I. Caragiannis, J. K. Lai, and A. D. Procaccia. Towards more expressive cake-cutting. In *Proceedings of the 22nd International Joint Conference on Artificial Intelligence (IJCAI)*, pages 127-132, 2011. [CORE: A*]

[C54] I. Caragiannis, A. Fanelli, N. Gravin, and A. Skopalik. Efficient computation of approximate pure Nash equilibria in congestion games. In *Proceedings of the 52nd Annual IEEE Symposium on Foundations of Computer Science (FOCS)*, pages 532-541, 2011. [CORE: A*]

[C55] I. Caragiannis, A. Filos-Ratsikas, and A. D. Procaccia. An improved 2-agent kidney exchange mechanism. In *Proceedings of the 7th International Workshop on Internet and Network Economics (WINE)*, LNCS 7090, Springer, pages 37-48, 2011.

[C56] I. Caragiannis, E. Elkind, M. Szegedy, and L. Yu. Mechanism design: from partial to probabilistic verification. In *Proceedings of the 13th ACM Conference on Electronic Commerce (EC)*, pages 266-283, 2012. [CORE: A*]

[C57] C. Boutilier, I. Caragiannis, S. Haber, T. Lu, A. D. Procaccia, and O. Sheffet. Optimal social choice functions: a utilitarian view. In *Proceedings of the 13th ACM Conference on Electronic Commerce (EC)*, pages 197-214, 2012. [CORE: A*]

[C58] I. Caragiannis, A. Fanelli, N. Gravin, and A. Skopalik. Approximate pure Nash equilibria in weighted congestion games: existence, efficient computation, and structure. In *Proceedings of the 13th ACM Conference on Electronic Commerce (EC)*, pages 284-301, 2012. [CORE: A*][14]

[C59] I. Caragiannis and C. Kalaitzis. Space lower bounds for low-stretch greedy embeddings. In *Proceedings of the 19th International Colloquium on Structural Information and Communication Complexity (SIROCCO)*, LNCS 7355, Springer, pages 1-12, 2012.[15]

[C60] J. Augustine, I. Caragiannis, A. Fanelli, and C. Kalaitzis. Enforcing efficient equilibria in network design games via subsidies. In *Proceedings of the 24th Annual ACM Symposium on Parallelism in Algorithms and Architectures* (*SPAA*), pages 277-286, 2012. [CORE: A][16]

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[12] [C51] was invited to the special issue of the *Journal of Combinatorial Optimization* with the best papers from *FAW/AAIM 11* (see [J26]).

[13] [C52] was invited to the special issue of *Journal of Economic Theory* dedicated to the interface between Economics and Computer Science (see [J32]).

[14] [C58] was invited to the special issue of *ACM Transactions on Economics and Computation* with the best papers from *EC 12* (see [J33]).

[15] [C59] was invited to the special issue of *Theoretical Computer Science* with the best papers from *SIROCCO 12* (see [J34]).

[16] [C60] was invited to the special issue of *ACM Transactions on Parallel Computing* with the best papers from *SPAA 12* (declined).

[C61] I. Caragiannis, C. Kaklamanis, P. Kanellopoulos, and M. Kyropoulou. Revenue guarantees in sponsored search auctions. In *Proceedings of the 20th Annual European Symposium on Algorithms* (*ESA*), LNCS 7501, Springer, pages 253-264, 2012. [CORE: A]

[C62] S. Branzei, I. Caragiannis, J. Morgenstern, and A. D. Procaccia. How bad is selfish voting? In *Proceedings of the 27th AAAI Conference on Artificial Intelligence (AAAI)*, pages 138-144, 2013. [CORE: A*]

[C63] I. Caragiannis, A. D. Procaccia, and N. Shah. When do noisy votes reveal the truth? In *Proceedings of the 14th ACM Conference on Electronic Commerce (EC)*, pages 143-160, 2013. [CORE: A*][17]

[C64] I. Caragiannis, C. Kaklamanis, and M. Kyropoulou. Limitations of deterministic auction design for correlated bidders. In *Proceedings of the 21st Annual European Symposium on Algorithms* (*ESA*), LNCS 8125, Springer, pages 277-288, 2013. [CORE: A]

[C65] I. Caragiannis, D. Kurokawa, and A. D. Procaccia. Biased games. In *Proceedings of the 28th AAAI Conference on Artificial Intelligence (AAAI)*, pages 609-615, 2014. [CORE: A*]

[C66] I. Caragiannis, A. D. Procaccia, and N. Shah. Modal ranking: a uniquely robust voting rule. In *Proceedings of the 28th AAAI Conference on Artificial Intelligence (AAAI)*, pages 616-622, 2014. [CORE: A*]

[C67] I. Caragiannis, A. Fanelli, and N. Gravin. Short sequences of improvement moves lead to approximate equilibria in constraint satisfaction games. In *Proceedings of the 7th International Symposium on Algorithmic Game Theory (SAGT)*, LNCS 8768, Springer, pages 49-60, 2014.

[C68] I. Caragiannis and A. A. Voudouris. Welfare guarantees for proportional allocations. In *Proceedings of the 7th International Symposium on Algorithmic Game Theory (SAGT)*, LNCS 8768, Springer, pages 206-217, 2014.[18]

[C69] I. Caragiannis, G. A. Krimpas, and A. A. Voudouris. Aggregating partial rankings with applications to peer grading in massive online open course. In *Proceedings of the 14th International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS),* pages 675-683*,* 2015. [CORE: A*]

[C70] I. Caragiannis, X. Chatzigeorgiou, P. Kanellopoulos, G. A. Krimpas, N. Protopapas, and A. A. Voudouris. Efficiency and complexity of price competition among single-product vendors. In *Proceedings of the 24th International Joint Conference on Artificial Intelligence (IJCAI)*, pages 25-33, 2015. [CORE: A*]

[C71] F. Abed, I. Caragiannis, and A. A. Voudouris. Near-optimal asymmetric binary matrix partitions. In *Proceedings of the 40th International Symposium on Mathematical Foundations of Computer Science (MFCS)*, LNCS 9235, Springer, pages 1-13, 2015. [CORE: A]

[C72] V. Auletta, I. Caragiannis, C. Galdi, D. Ferraioli, and G. Persiano. Minority becomes majority in social networks. In *Proceedings of the 11th Conference on Web and Internet Economics (WINE)*, LNCS 9470, Springer, pages 1-15, 2015.

[C73] S. Branzei, I. Caragiannis, D. Kurokawa, and A. D. Procaccia. An algorithmic framework for strategic fair division. In *Proceedings of the 30th AAAI Conference on Artificial Intelligence (AAAI)*, pages 418-424, 2016. [CORE: A*]

[C74] I. Caragiannis, G. A. Krimpas, M. Panteli, and A. Voudouris. co-rank: an online tool for collectively deciding efficient rankings among peers. In *Proceedings of the 30th AAAI Conference on Artificial Intelligence (AAAI)*, pages 4351-4352, 2016. [CORE: A*]

[C75] I. Caragiannis, L. Gourves, and J. Monnot. Achieving proportional representation in conference programs. In *Proceedings of the 25th International Joint Conference on Artificial Intelligence (IJCAI)*, pages 144-150, 2016. [CORE: A*]

[C76] V. Auletta, I. Caragiannis, C. Galdi, D. Ferraioli, and G. Persiano. Generalized discrete preference games. In *Proceedings of the 25th International Joint Conference on Artificial Intelligence (IJCAI)*, pages 53-59, 2016. [CORE: A*]

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17 [C63] was invited to the special issue of *ACM Transactions on Economics and Computation* with the best papers from *EC 13* (see [J37]).

18 [C68] was invited to the special issue of *Theory of Computing Systems* with the best papers from *SAGT 14* (see [J40]).

[C77] I. Caragiannis, S. Nath, A. D. Procaccia, and N. Shah. Subset selection via implicit utilitarian voting. In *Proceedings of the 25th International Joint Conference on Artificial Intelligence (IJCAI)*, pages 151-157, 2016. [CORE: A*]

[C78] I. Caragiannis, A. D. Procaccia, and N. Shah. Truthful univariate estimators. In *Proceedings of the 33rd International Conference on Machine Learning (ICML)*, pages 127-135, 2016. [CORE: A*]

[C79] I. Caragiannis, G. A. Krimpas, and A. A. Voudouris. How effective can simple ordinal peer grading be? In *Proceedings of the 17th ACM Conference on Economics and Computation (EC)*, pages 323-340, 2016. [CORE: A*][19]

[C80] I. Caragiannis, D. Kurokawa, H. Moulin, A. D. Procaccia, N. Shah, and J. Wang. The unreasonable fairness of the maximum Nash welfare. In *Proceedings of the 17th ACM Conference on Economics and Computation (EC)*, pages 305-322, 2016. [CORE: A*][20]

[C81] I. Caragiannis and A. Fanelli. An almost ideal coordination mechanism for unrelated machine scheduling. In *Proceedings of the 9th International Symposium on Algorithmic Game Theory (SAGT)*, LNCS 9928, Springer, pages 315-326, 2016.[21]

[C82] I. Caragiannis, A. Filos-Ratsikas, S. K. S. Frederiksen, K. A. Hansen, and Z. Tan. Truthful facility assignment with resource augmentation: An exact analysis of serial dictatorship. In *Proceedings of the 12th Conference on Web and Internet Economics (WINE)*, LNCS 10123, Springer, pages 236-250, 2016.

[C83] A. Blum, I. Caragiannis, N. Haghtalab, A. D. Procaccia, E. B. Procaccia, and R. Vaish. Opting into optimal matchings. In *Proceedings of the 28th Annual ACM-SIAM Symposium on Discrete Algorithms (SODA)*, pages 2351-2363, 2017. [CORE: A*]

[C84] I. Caragiannis, X. Chatzigeorgiou, G. A. Krimpas, and A. A. Voudouris. Optimizing positional scoring rules for rank aggregation. In *Proceedings of the 31st AAAI Conference on Artificial Intelligence (AAAI)*, pages 430-436, 2017. [CORE: A*]

[C85] V. Auletta, I. Caragiannis, C. Galdi, D. Ferraioli, and G. Persiano. Robustness in discrete preference games. In *Proceedings of the 16th International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS),* pages 1314-1322, 2017. [CORE: A*]

[C86] V. Bilo, I. Caragiannis, A. Fanelli, M. Flammini, and G. Monaco. Simple greedy algorithms for fundamental multidimensional graph problems. In *Proceedings of the 44th International Colloquium on Automata, Languages, and Programming (ICALP)*, pages 125:1-13, 2017. [CORE: A]

[C87] I. Caragiannis, A. A. Voudouris, and P. Kanellopoulos. Bounding the inefficiency of compromise. In *Proceedings of the 26th International Joint Conference on Artificial Intelligence (IJCAI),* pages 142-148, 2017. [CORE: A*]

[C88] I. Caragiannis and E. Micha. Learning a ground truth ranking using noisy approval votes. In *Proceedings of the 26th International Joint Conference on Artificial Intelligence (IJCAI),* pages 149-155, 2017. [CORE: A*]

[C89] V. Auletta, I. Caragiannis, C. Galdi, D. Ferraioli, and G. Persiano. Information retention in heterogeneous majority dynamics. In *Proceedings of the 13th Conference on Web and Internet Economics (WINE)*, LNCS 10674, Springer, pages 30-43, 2017.

[C90] I. Caragiannis, V. Gkatzelis, and C. Vinci. Cost-sharing protocols, coordination mechanisms, and approximation algorithms for scheduling. In *Proceedings of the 13th Conference on Web and Internet Economics (WINE)*, LNCS 10674, Springer, pages 74-87, 2017.

[C91] H. Aziz, S. Bouveret, I. Caragiannis, I. Giagkousi, and J. Lang. Knowledge, fairness, and social constraints. In *Proceedings of the 32nd AAAI Conference on Artificial Intelligence (AAAI)*, pages 4638–4645, 2018. [CORE: A*]

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[19] [C79] was invited to the special issue of *ACM Transactions on Economics and Computation* with the best papers from *EC 16* (see [J47]).

[20] [C80] was invited to the special issue of *ACM Transactions on Economics and Computation* with the best papers from *EC 16* (see [J45]).

[21] [C81] was invited to the special issue of *Theory of Computing Systems* with the best papers from *SAGT 16* (see [J44]).

[C92] I. Caragiannis and A. A. Voudouris. The efficiency of resource allocation mechanisms for budget-constrained users. In *Proceedings of the 19th ACM Conference on Economics and Computation (EC)*, pages 681–698, 2018. [CORE: A*]

[C93] V. Bilo, I. Caragiannis, M. Flammini, A. Igarashi, G. Monaco, D. Peters, C. Vinci, and W. Zwicker. Almost envy-free allocations with connected bundles. In *Proceedings of the 10th Innovations in Theoretical Computer Science Conference (ITCS)*, pages 14:1-21, 2019. [CORE: A]

[C94] I. Caragiannis and A. Fanelli. On approximate pure Nash equilibria in weighted congestion games with polynomial latencies. In *Proceedings of the 46th International Colloquium on Automata, Languages, and Programming (ICALP)*, pages 133:1-12, 2019. [CORE: A][22]

[C95] I. Caragiannis, N. Gravin, and X. Huang. Envy-freeness up to any item with high Nash welfare: The virtue of donating items. In *Proceedings of the 20th ACM Conference on Economics and Computation (EC)*, pages 527-545, 2019. [CORE: A*]

[C96] I. Caragiannis, A. Filos-Ratsikas, P. Kanellopoulos, and R. Vaish. Stable fractional matchings. In *Proceedings of the 20th ACM Conference on Economics and Computation (EC)*, pages 21-39, 2019. [CORE: A*]

[C97] I. Caragiannis and E. Tsitsoka. Deanonymization of social networks using structural information. In *Proceedings of the 28th International Joint Conference on Artificial Intelligence (IJCAI)*, pages 1213-1219, 2019. [CORE: A*]

[C98] S. Airiau, H. Aziz, I. Caragiannis, J. Kruger, J. Lang, and D. Peters. Portioning using ordinal preferences: fairness and efficiency. In *Proceedings of the 28th International Joint Conference on Artificial Intelligence (IJCAI)*, pages 11-17, 2019. [CORE: A*][23]

[C99] H. Aziz, I. Caragiannis, A. Igarashi, and T. Walsh. Fair allocation of combinations of indivisible goods and chores. In *Proceedings of the 28th International Joint Conference on Artificial Intelligence (IJCAI)*, pages 53-59, 2019. [CORE: A*]

[C100] I. Caragiannis and E. Micha. A contribution to the critique of liquid democracy. In *Proceedings of the 28th International Joint Conference on Artificial Intelligence (IJCAI)*, pages 116-122, 2019. [CORE: A*]

[C101] I. Caragiannis, G. Christodoulou, and N. Protopapas. Impartial selection with additive approximation guarantees. In *Proceedings of the 12th International Symposium on Algorithmic Game Theory (SAGT)*, LNCS 11801, Springer, pages 269-283, 2019.[24]

[C102] I. Caragiannis, C. Kaklamanis, N. Karanikolas, and G. A. Krimpas. Evaluating approval-based multiwinner voting in terms of robustness to noise. In *Proceedings of the 29th International Joint Conference on Artificial Intelligence (IJCAI)*, pages 74-80, 2020. [CORE: A*][25]

[C103] I. Caragiannis, P. Kanellopoulos, and M. Kyropoulou. On interim envy-free allocation lotteries. In *Proceedings of the 22nd ACM Conference on Economics and Computation (EC)*, pages 264-284, 2021. [CORE: A*]

[C104] I. Caragiannis, N. Gravin, P. Lu, and Z. Wang. Relaxing the independence assumption in sequential posting pricing, prophet inequality, and random bipartite matching. In *Proceedings of the 17th Conference on Web and Internet Economics (WINE)*, LNCS 13112, Springer, pages 131-148, 2021.

[C105] I. Caragiannis and S. Ioannidis. Computing envy-freeable allocations with limited subsidies. In *Proceedings of the 17th Conference on Web and Internet Economics (WINE)*, LNCS 13112, Springer, pages 522-539, 2021.

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[22] [C94] was invited to the special issue of the *Journal of Computer and System Sciences* with the best papers from *ICALP 19* Track C (see [J48]).

[23] [C98] was selected (among the 4752 papers that were submitted and the 850 papers that eventually appeared) as one of the top three papers of *IJCAI 19*, receiving a distinguished paper honorable mention. It was also invited for publication in *Artificial Intelligence* through the fast-track scheme (see [J58]).

[24] [C101] was invited to the special issue of *Theory of Computing Systems* with the best papers from *SAGT 19* (see [J55]).

[25] [C102] was invited for publication in *Autonomous Agents and Multi-Agent Systems* through the fast-track scheme (see [J51]).

[C106] I. Caragiannis and K. Fehrs. The complexity of learning approval-based multi-winner voting rules. In *Proceedings of the 36th AAAI Conference on Artificial Intelligence (AAAI)*, pages 4925-4932, 2022. [CORE: A*]

[C107] I. Caragiannis, E. Micha, and N. Shah. A little charity guarantees fair connected graph partitioning. In *Proceedings of the 36th AAAI Conference on Artificial Intelligence (AAAI)*, pages 4908-4916, 2022. [CORE: A*]

[C108] I. Caragiannis, N. Shah, and A. A. Voudouris. The metric distortion of multiwinner voting. In *Proceedings of the 36th AAAI Conference on Artificial Intelligence (AAAI)*, pages 4900-4907, 2022. [CORE: A*]

[C109] I. Caragiannis, G. Christodoulou, and N. Protopapas. Truthful aggregation of budget proposals with proportionality guarantees. In *Proceedings of the 36th AAAI Conference on Artificial Intelligence (AAAI)*, pages 4917-4924, 2022. [CORE: A*]

[C110] I. Caragiannis, V. Gkatzelis, A. Psomas, and D. Schoepflin. Beyond cake cutting: Allocating homogeneous divisible goods. In *Proceedings of the 21st International Joint Conference on Autonomous Agents and Multiagent Systems* (*AAMAS*), pages 208-216, 2022. [CORE: A*][26]

[C111] C. Bouras, I. Caragiannis, A. Gkamas, N. Protopapas, T. Sardelis, and K. Sgarbas. State of the art analysis of resource allocation techniques in 5G MIMO networks. In *Proceedings of the 37th International Conference on Information Networking (ICOIN)*, 2023, forthcoming.

[C112] I. Caragiannis and S. Narang. Repeatedly matching items to agents fairly and efficiently. In *Proceedings of the 22nd International Joint Conference on Autonomous Agents and Multiagent Systems* (*AAMAS*), pages 2670-2672, 2023. [CORE: A*]

[C113] I. Caragiannis, G. Christodoulou, and N. Protopapas. Impartial selection with prior information. In *Proceedings of the 2023 ACM Web Conference* (*TheWebConf*), pages 3614-3624, 2023. [CORE: A*]

[C114] I. Caragiannis and Z. Jiang. Computing better approximate pure Nash equilibria in cut games via semidefinite programming. In *Proceedings of the 55th Annual ACM Symposium on Theory of Computing* (*STOC*), pages 710-722, 2023. [CORE: A*]

[C115] I. Caragiannis, J. Garg, N. Rathi, E. Sharma, and G. Varricchio. New fairness concepts for allocating indivisible items. In *Proceedings of the 32nd International Joint Conference on Artificial Intelligence (IJCAI)*, 2023, forthcoming. [CORE: A*]

[C116] I. Caragiannis and N. I. Schwartzbach. Outsourcing adjudication to strategic jurors. In *Proceedings of the 32nd International Joint Conference on Artificial Intelligence (IJCAI)*, 2023, forthcoming. [CORE: A*]

[26] [C110] was invited for publication in *Autonomous Agents and Multi-Agent Systems* through the fast-track scheme. Currently under review.