

George Krimpas

CONTACT INFORMATION

Address: Thea, Messatida, 26223, Patras, Greece
Mobile: +30 6948231814
Telephone: +30 2610 334868
E-mail: kribas@upatras.gr
URL: <http://students.ceid.upatras.gr/~krimpas/>
Google Scholar: <https://scholar.google.gr/citations?user=DkDEfDQAAAAJ&hl=en>
LinkedIn: <https://www.linkedin.com/in/george-krimpas-669b4a3b>

EDUCATION

Ph.D. in Computer Science and Technology **2013–2018**
Department of Computer Engineering and Informatics
University of Patras, Greece
Thesis: *Rank aggregation of partial rankings: algorithms and applications.*
Advisor: Ioannis Caragiannis

M.Sc. program in Computer Science and Technology **2010–2013**
Department of Computer Engineering and Informatics
University of Patras, Greece
Thesis: *Design and development of a platform that supports data processing of Diavgeia system.*
Supervisor: Dimitrios Christodoulakis
GPA: 9.1/10

Ptychion in Economics **2004–2010**
University of Patras, Greece

RESEARCH INTERESTS

Design and analysis of algorithms, approximation algorithms, algorithmic game theory, computational social choice, fuzzy cognitive maps, experimental and behavioral economics, risk analysis, computational risk assessment.

TECHNICAL SKILLS

Programming Languages: Python, PHP, Matlab,
Web Services: Design and developing Rest APIs for data collection and transmission.
Operating systems: Windows 10, Windows Server 2019, CentOS 8
Databases: MySQL, Microsoft Access
Web design: WordPress, HTML, CSS, Bootstrap,

RESEARCH PROJECTS

Principal Investigator. *Enhancing the quality of public consultation through computational methods for improved decision-making.* Trust your Stars, TAA.

December 2019 – March 2021. *Decision-making in multi-agent systems through Argumentation Framework and Social Choice Theory.* Co-financed by Greece and the European Union (ESF) through the Operational Programme “Human Resources Development, Education and Lifelong Learning 2014–2020”. (MIS 5047146) (Postdoctoral Research)

September 2019 – January 2020. *Smart Microcontrolled Automatic Real Time Welding in-Loop Device(SMART WELD)*.(MIS 5019642)

October 2016 – September 2017. Basic research project E.114, supported by the University of Patras through the research funding program Caratheodory 2013.

October 2014 – December 2015. Basic research project Algorithmic Game Theory Supported by the European Social Fund and Greek national funds through the research funding program Thales.

ACADEMIC SERVICE **Guest Editor** – Information (MDPI)

Special Issue: “Next-Generation Decision Support Systems: AI, ML and Generative Models”, (2026) (Link: https://www.mdpi.com/journal/information/special_issues/1NOG1FJPYH)

CONFERENCES

- [C9] D. Tsakalos, G. A. Krimpas, & D. Mourtzis. **Digital Twin for early-stage fault detection in a Hybrid Manufacturing Cell**. *The 5th Digital Twin International Conference 2025*.
- [C8] D. Tsakalos, G. A. Krimpas, & D. Mourtzis. **Industrial Metaverse Challenges, Opportunities, and the Impact on Sustainability**. *The 5th Digital Twin International Conference*.
- [C7] G. A. Krimpas, N. A. Krimpas and P. P. Groumpos. **An Overview of Making Decisions on Medical Problems using Fuzzy Cognitive Maps**. *In proceedings of the 14th International Conference on Information, Intelligence, Systems & Applications (IISA), IISA 2023, pp. 1-6, .*
- [C6] I. Caragiannis, C. Kaklamanis, N. Karanikolas, and G. A. Krimpas. **Evaluating approval-based multiwinner voting in terms of robustness to noise**. February 2020. *In proceedings of the Twenty-Ninth IJCAI International Joint Conference on Artificial Intelligence, IJCAI 2020*, p. 74 – 80.
- [C5] I. Caragiannis, Xenophon Chatzigeorgiou, G. A. Krimpas, and A. A. Voudouris. **Optimizing positional scoring rules for rank aggregation**. *In proceedings of the Thirty-First AAAI Conference on Artificial Intelligence, AAAI 2017*, p. 430 – 436.
- [C4] [C1] 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 2017*, p. 323 – 340.
- [C3] I. Caragiannis, G. A. Krimpas, M. Panteli, and A. A. Voudouris. **co-rank: An Online Tool for Collectively Deciding Efficient Rankings Among Peers**. *In Proceedings of the Thirtieth AAAI Conference on Artificial Intelligence, AAAI 2016*, p. 4351 – 4352.
- [C2] 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 2015*, p. 25 – 31.

- [C1] I. Caragiannis, G. A. Krimpas, and A. A. Voudouris. **Aggregating partial rankings with applications to peer grading in massive online open courses.** *In Proceedings of the International Conference on Autonomous Agents and Multi-Agent Systems, AAMAS 2015*, p. 675 – 683.

JOURNALS

- [J16] Krimpas, G. A., Thanasas, G., Krimpas, N. A., Rigou, M., & Lampropoulou, K. (2026). **Hierarchical Fuzzy Cognitive Maps for Financial Risk Monitoring Using Aggregated Financial Concepts.** *Journal of Risk and Financial Management*, 19(3), 219. <https://doi.org/10.3390/jrfm19030219>
- [J15] Tsakalos, D., Krimpas, G. A., & Mourtzis, D. (2026). **Digital twin for early-stage fault detection in a hybrid manufacturing cell.** Taylor Francis, Digital Twin. <https://doi.org/10.1080/27525783.2026.2622705>
- [J14] D. Tsakalos, G. A. Krimpas, & D. Mourtzis. **Industrial Metaverse Challenges, Opportunities, and the Impact on Sustainability.** Taylor Francis, Digital Twin. <https://doi.org/10.1080/27525783.2025.2600190>
- [J13] Karras, A., Theodorakopoulos, L., Karras C., Krimpas, G. A., Giannaros, A., Bakalis, C. P., (2025). **LLM-Driven Big Data Management Across Digital Governance, Marketing, and Accounting: A Spark-Orchestrated Framework.** *Algorithms*, 18(12), 791.
- [J12] Krimpas, G. A., Mourtzis, D., & Tsakalos, D. (2025). **Metaverse: Industrial Applications—challenges and opportunities.** *Procedia CIRP*, 136, 55-60.
- [J11] Karras, C., Theodorakopoulos, L., Karras, A., Krimpas, G. A., Bakalis, C. P., & Theodoropoulou, A. (2025). **MCMC Methods: From Theory to Distributed Hamiltonian Monte Carlo over PySpark.** *Algorithms*, 18(10), 661.
- [J10] N. Amasiadi, M. Aslani-Gkotszamanidou, L. Theodorakopoulos, A. Theodoropoulou, G. A. Krimpas, C. Merkouris, & A. Karras, (2025). **AI-Driven Bayesian Deep Learning for Lung Cancer Prediction: Precision Decision Support in Big Data Health Informatics.** *BioMedInformatics*, 5(3), 39.
- [J9] L. Theodorakopoulos, A. Karras, & G. A. Krimpas (2025). **Optimizing apache spark MLlib: Predictive performance of large-scale models for big data analytics.** *Algorithms*, 18(2), 74.
- [J8] C. Karras, L. Theodorakopoulos, A. Karras, & G. A. Krimpas (2024). **Efficient Algorithms for Range Mode Queries in the Big Data Era.** *Information*, 15(8), 450.
- [J7] E. Mourelatos, G. A. Krimpas, and K. Giotopoulos (2024). **Sexual identity and Gender Gap in Leadership. A political intention experiment,** *Review of Behavioral Economics*: Vol. 11: No. 1, pp 73-121.

- [J6] A. Karras, A. Giannaros, C. Karras, L. Theodorakopoulos, C. S. Mammassis, G. A. Krimpas, S. Sioutas. **TinyML Algorithms for Big Data Management in Large-Scale IoT Systems**. *Future Internet*. 2024; 16(2):42.
- [J5] A. Karras, A. Giannaros, L. Theodorakopoulos, G. A. Krimpas, G. Kalogeratos, C. Karras, & S. Sioutas (2023). **FLIBD: A Federated Learning-Based IoT Big Data Management Approach for Privacy-Preserving over Apache Spark with FATE**. *Electronics*, 12(22), 4633.
- [J4] I. Caragiannis, C. Kaklamanis, N. Karanikolas, and G. A. Krimpas. **Evaluating approval-based multiwinner voting in terms of robustness to noise**. *Autonomous Agents and Multi-Agent Systems* 36, 1 (2022).
- [J3] I. Caragiannis, G. A. Krimpas, and A. A. Voudouris. **How effective can simple ordinal peer grading be?** *ACM Transactions on Economics and Computation (TEAC)* 8.3 (2020): 1-37.
- [J2] I. Caragiannis, Xenophon Chatzigeorgiou, G. A. Krimpas, and A. A. Voudouris. **Optimizing positional scoring rules for rank aggregation**. *Artificial Intelligence*, volume 267, pages 58-77, 2019.
- [J1] 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*, volume 248, pages 9-25, 2017.

PAPERS UNDER
REVIEW

- Krimpas, G. A., Thanasas, G., Krimpas, N. A. **Designing Manipulation-Resistant Risk Scoring Rules under Strategic Reporting**. *Decision Support Systems*.
- Mourelatos, E., Krimpas, N. A., Krimpas, G. A. **Can Empathy Close the Gender Gap in Altruism? Evidence from a Dictator Game Experiment with AI and Human Messages**. *Journal of Economic Behavior and Organization*.
- Mourelatos, E., Khan, T., Krimpas, G. A. **Competitiveness, Shocks, and Gender: Evidence from an Experiment**. *Economic Inquiry*.
- Gazeta, A., Krimpas, G. A., Rigou, M., Thanasas, G. L. **Multimodal Cognitive Task Detection Using Physiological and Motion Signals**. In the 17th International Conference on Information, Intelligence, Systems and Applications (IISA 2026).
- Krimpas, G. A., Thanasas, G., Krimpas, N. A. (2026). **Strategic Reporting under Capacity-Constrained Monitoring: Why Scoring Architecture Matters**. *Finance Research Letter*.
- Krimpas, G. A., Thanasas, G., Krimpas, N. A. (2026). **Causally Interpretable Credit Risk Assessment under Weak Supervision: Evidence from Fuzzy Cognitive Maps**. *International Journal of Banking Accounting and Finance*.

WORKING PAPERS

- E. Mourelatos, G. A. Krimpas, N. A. Krimpas. Experiments on Entrepreneurship and trustworthiness. Working Paper on **Behavioral and Experimental Economics**.

TEACHING
EXPERIENCE

Fall 2025-2026: Teaching for the mandatory “*Quantitative Methods in Business and Economics*” for the Department of Management Science and Technology at the University of Patras, under the program “*Entetalmenoi Erevnites*”.

Fall 2024-2025: Teaching for the mandatory “*Quantitative Methods in Business Decision Making*” for the Department of Management Science and Technology at the University of Patras, under the program “*Entetalmenoi Erevnites*”.

Spring 2023-2024: Teaching for the mandatory “*Economic Theory I*” for the Department of Management Science and Technology at the University of Patras, under the program “*Entetalmenoi Erevnites*”.

Fall 2023-2024: Teaching for the mandatory “*Quantitative Methods in Business Decision Making*” for the Department of Management Science and Technology at the University of Patras, under the program “*Entetalmenoi Erevnites*”.

Spring 2022-2023: Teaching for the elective “*Data Analysis in Social Networks*” for the Department of Management Science and Technology at the University of Patras, under the program “*Academic Experience to new Ph.D. scientists*”.

Fall 2022-2023: Teaching for the mandatory “*Operations Research*” for the Department of Management Science and Technology at the University of Patras, under the program “*Academic Experience to new Ph.D. scientists*”.

Spring 2021-2022: Teaching for the elective “*Algorithmic Marketing*” for the Department of Management Science and Technology at the University of Patras, under the program “*Academic Experience to new Ph.D. scientists*”.

Fall 2021-2022: Teaching for the elective “*Digital Marketing*” for the Department of Management Science and Technology at the University of Patras, under the program “*Academic Experience to new Ph.D. scientists*”.

Spring 2020-2021: Teaching for the elective “*Introduction to Technology and Mechanics*” for the Museology department at the University of Patras, under the program “*Academic Experience to new Ph.D. scientists*”.

Fall 2010: Teaching assistant for the basic course “*Databases: Theory and Laboratory*”

Fall 2011: Teaching assistant for the elective “*Languages Technology*”

WORKING
EXPERIENCE

- **Research Committee – University of Patras:** **2019 – present**
Software Developer – Server Management – Financial Reports – Developing Good Management Practices – Technical User Support
- **EFG Eurobank:** Two months internship in the retail banking. **2008**
- **OTE:** Customer Service. **2007–2008**

REVIEWER
SERVICE

- **Sub-referee:** AAMAS 2015, AAMAS 2021.
- **Referee:** ECAI 2023.

SCHOOLS

- 16th European Agent Systems Summer School (EASSS 2014).
Technical University of Crete, Chania, Greece, 14 July – 18 July 2014.
My participation was financially supported by the local newspaper “Chaniotika Nea”.

LANGUAGE
SKILLS

Greek (Mother tongue), English