Tomasz Wąs

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Employment

Postdoc researcher at *CNRS*, *LAMSADE*, *Université Paris Dauphine–PSL* with Jérôme Lang and Dominik Peters	2023–2024 (ongoing)
Postdoctoral scholar at the Pennsylvania State University in the *Foundations of Artificial Intelligence Research Lab* led by Hadi Hosseini	2022–2023
Research assistant at the AGH University in the ERC project *PRAGMA* led by Piotr Faliszewski	2022

Education

PhD in Computer Science with a honorary distinction, University of Warsaw Thesis: *Axiomatization of the Walk-Based Centrality Measures* Supervisors: Marcin Dziubiński and Oskar Skibski	2017–2022
MSc in Mathematics, University of Warsaw Thesis: *An Axiomatization of the Eigenvector and Katz Centralities and Their Application to Financial System* Supervisor: Mariusz Skałba	2015–2017
BSc in Economics, University of Warsaw Thesis: *Recreational Value of the Baltic Sea—the Travel Cost Method Accounting for Heterogeneity of Travel Types* Supervisor: Mikołaj Czajkowski	2012–2015
BSc in Mathematics, University of Warsaw Thesis: *Compressed Sensing and Subgaussian Matrices* Supervisor: Witold Bednorz	2012–2015

Awards

honorable mention in the **Polish Artificial Intelligence Society** PhD thesis contest	2023
Rector's Scholarship for Outstanding Doctoral Students	2019
The first prize in **Data Science Masters** contest for the best master's thesis in the fields of data science and machine learning in 2017 in Poland	2018
"Kartezjusz" Scholarship—part of the POWER program of The National Centre for Research and Development	2017–2020

Research Visits

Université Paris-Dauphine, Paris, France, hosted by Jérôme Lang and Dominik Peters	2022
AGH University, Kraków, Poland, hosted by Piotr Faliszewski	2021
Kyushu University, Fukuoka, Japan, hosted by Makoto Yokoo	2019

Publications

P. Faliszewski, A. Kaczmarczyk, K. Sornat, S. Szufa, T. Wąs, *Diversity, Agreement, and Polarization in Elections*, In Proceedings of the 32nd International Joint Conference on Artificial Intelligence (**IJCAI-23**), pp. 2684–2692.

H. Hosseini, A. Mammadov, T. Wąs, *Fairly Allocating Goods and (Terrible) Chores*, In Proceedings of the 32nd International Joint Conference on Artificial Intelligence (**IJCAI-23**), pp. 2738–2746.

T. Wąs, O. Skibski, *Axiomatic Characterization of PageRank*, Artificial Intelligence 318 (**AIJ**), 103900, 2023.

N. Boehmer, J.-Y. Cai, P. Faliszewski, A. Z. Fan, Ł. Janeczko, A. Kaczmarczyk, T. Wąs, *Properties of Position Matrices and Their Elections*, In Proceedings of the 37th AAAI Conference on Artificial Intelligence (**AAAI-23**), pp. 5507–5014.

N. Boehmer, P. Faliszewski, R. Niedermeier, S. Szufa, T. Wąs, *Understanding Distance Measures Among Elections*, In Proceedings of the 31st International Joint Conference on Artificial Intelligence (**IJCAI-22**), pp. 102–108

N. Kucharczuk, T. Wąs, O. Skibski, *PageRank for Edges: Axiomatic Characterization*, In Proceedings of the 36th AAAI Conference on Artificial Intelligence (**AAAI-22**), pp. 5108–5115

T. Wąs, O. Skibski, *An Axiom System for Feedback Centralities*, In Proceedings of the 30th International Joint Conference on Artificial Intelligence (**IJCAI-21**), pp. 443–449

T. Wąs, M. Waniek, T. Rahwan, T. Michalak, *The Manipulability of Centrality Measures—An Axiomatic Approach*, In Proceedings of the 19th International Conference on Autonomous Agents and Multiagent Systems (**AAMAS-20**), pp. 1467–1475

T. Wąs, T. Rahwan, O. Skibski, *Random Walk Decay Centrality*, In Proceedings of the 33rd AAAI Conference on Artificial Intelligence (**AAAI-19**), pp. 2197–2204

T. Wąs, O. Skibski, *Axiomatization of the PageRank Centrality*, In Proceedings of the 27th International Joint Conference on Artificial Intelligence (**IJCAI-18**), pp. 3898–3904

T. Wąs, O. Skibski, *An Axiomatization of the Eigenvector and Katz Centralities*, In Proceedings of the 32nd AAAI Conference on Artificial Intelligence (**AAAI-18**), pp. 1258–1265

Service

Co-organizer of the **5th Games, Agents, and Incentives Workshop** co-located with AAMAS-23 conference.	2023
Vice-president of the **PhD Students' Union** at the University of Warsaw	2021–2022
Finance coordinator at the **ML in PL 2019 Conference** (Warsaw, Poland)	2019
Marketing coordinator at the **PL in ML 2018 Conference** (Warsaw, Poland)	2018
Founding member and member of the executive board of **ML in PL Association**	2018–2020
Reviewer for the Mathematics of Operations Research and Autonomous Agents and Multi-Agent Systems journals	2022
Program committee member for the AAAI-21, IJCAI-21, AAAI-22, IJCAI-22, AAAI-23, AAMAS-23, IJCAI-23, and AAAI-24 conferences	2020–2022
Auxiliary reviewer for the AAAI-18, IJCAI-18, AAAI-19, AAMAS-19, AAAI-20, AAMAS-20, AAMAS-22, and EC-23 conferences	2018–2022

Selected Presentations

The 37th AAAI Conference on Artificial Intelligence (**AAAI-23**), Washington, DC, USA

The 36th AAAI Conference on Artificial Intelligence (**AAAI-22**), virtual

The 30th International Joint Conference on Artificial Intelligence (**IJCAI-21**), virtual

The 19th International Conference on Autonomous Agents and Multiagent Systems (**AAMAS-20**), virtual

The 8th International Conference on **Complex Networks** and their Applications (2019), Lisbon, Portugal

Forum Informatyki Teoretycznej 2019 (**FIT-2019**), Kraków, Poland

The 33rd AAAI Conference on Artificial Intelligence (**AAAI-19**), Honolulu, HI, USA

VII Hurwicz Workshop on Mechanism Design Theory (2018), Warsaw, Poland

The 27th International Joint Conference on Artificial Intelligence (**IJCAI-18**), Stockholm, Sweden

Forum Informatyki Teoretycznej 2018 (**FIT-2018**), Kraków, Poland

The 32nd AAAI Conference on Artificial Intelligence (**AAAI-18**), New Orleans, LA, USA

Teaching & Popular Science

Tutorials in *Discrete Mathematics* x3 (60h per year)	2018–2020
Guest lectures in computational social choice at University of Warsaw and Pennsylvania State University	2020–2023
Article *Jak Leo uratował klasowe wybory* in Delta (09/2021)	2021

Interests

Computational Social Choice, Network Science, Game Theory, Machine Learning