

Prospective supervisor's form

Name of the supervisor: Dariusz Dereniowski

Academic title: PhD, GUT professor

Orcid ID number: <https://orcid.org/0000-0003-4000-4818>

Faculty of Faculty of Electronics, Telecommunications and Informatics

Gdańsk University of Technology Department of Department of Algorithms and Systems Modelling

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Personal web page: https://pg.edu.pl/4a33edb840_dariusz.dereniowski

Discipline: technical informatics and telecommunications none

Optional

Key words (obligatory four key words describing research interests / expertise):

theory of algorithms

computational complexity

distributed algorithms

graph theory

Bibliometric indicators

1. Number of journal publications in WoS/ Scopus 187/301

2. Citations excluding self-citations WoS 142 Scopus 223

3. Hirsch index WoS 8 Scopus 10

1. The number of PhD students who have graduated under your supervision: 1

2. The number of PhD students currently supervised:

a. within the current doctoral school 1

b. within doctoral studies (previous system) 2

3. Are you currently accepting new PhD students:

a. Polish Yes/No Yes

b. Foreign Yes/No Yes

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Research interests or topics offered for PhD research (no more than 2000 characters)ⁱⁱ

My research interests concentrate around the theory of algorithm and their applications. These include both centralized, on-line and distributed algorithms, especially in the field of graph theory. In the distributed setting, of main interest is so called mobile agent computing. Particular problems are graph exploration, leader election, all kind of searching, with a potential application in the navigation algorithms for teams of robots. The potential applications of graph-theoretic algorithms also include selected machine learning approaches to problem solving.

Funding or special equipment needed to carry out a PhD projectⁱⁱⁱ:

1. Is funding available for experimental work: *Yes/No/not needed* **not needed**

2. Is the equipment needed to complete a PhD project
available in your lab/department: *Yes/No/not needed* **not needed**

Most important publications – no more than 5 published after 1.01.2018

No	Authors/title/journal	Number of points according to the current list of the Ministry of Science and Higher Education	Publication year
1.	Jurek Czyzowicz, Dariusz Dereniowski, Andrzej Pelc: Building a Nest by an Automaton. <i>ESA</i> 2019: 35:1-35:14	140	2019
2.	Dariusz Dereniowski, Wieslaw Kubiak: Shared processor scheduling of multiprocessor jobs. <i>Eur. J. Oper. Res.</i> 282(2): 464-477 (2020)	140	2020

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3.	Dariusz Dereniowski, Dorota Osula, Pawel Rzazewski: Finding small-width connected path decompositions in polynomial time. Theor. Comput. Sci. 794: 85-100 (2019)	100	2019
4.	Dariusz Dereniowski, Andrzej Lingas, Dorota Osula, Mia Persson, Pawel Zylinski: Clearing directed subgraphs by mobile agents: Variations on covering with paths. J. Comput. Syst. Sci. 102: 57-68 (2019)	100	2019
5.	Dariusz Dereniowski, Tomas Gavenciak, Jan Kratochvíl: Cops, a fast robber and defensive domination on interval graphs. Theor. Comput. Sci. 794: 47-58 (2019)	100	2019

Most recent externally funded projects you were involved in – no more than 3

No	Project title, the name of the Principal Investigator (PI) and the institution the project was carried out	Years	Role in the project ^{iv}
1.	Title: "Searching graph structures", Principal Investigator: Dariusz Dereniowski, Institution: Faculty of Electronics, Telecommunications and Informatics, Gdansk University of Technology	2016-2019	PI
2.	Title: "Graph modeling of search processes", Principal Investigator: Dariusz Dereniowski, Institution: Faculty of Electronics, Telecommunications and Informatics, Gdansk University of Technology	2019-2022	PI
3.			PI

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Additional relevant information – (no more than 1600 characters)^v



- ⁱ You may select up to two disciplines out of 12 disciplines represented in the Doctoral School
- ⁱⁱ Observe the limit of not more than 2000 characters
- ⁱⁱⁱ Leave only one answer
- ^{iv} Select the role in the project: PI stands for principal investigator (refers to the holder of an independent grant and the lead researcher for the grant project), Co-I for co-investigator (Co-I assists the principal investigator in the management and leadership of the research project), R for researcher
- ^v Add any other relevant information e.g. awards for PhD students whom you supervised (no more than 1600 characters)