

Name of the advisor: Paweł Czarnul**Academic title: Ph.D., D.Sc., Eng**Orcid ID number: <https://orcid.org/0000-0002-4918-9196>**Department of Computer Architecture****Faculty of Electronics, Telecommunications and Informatics****Gdańsk University of Technology****Phone: +48 (58) 347 12 88****E-mail: pczarnul@eti.pg.edu.pl****Personal web page: www.pg.edu.pl/82cbf6c40b_pawel.czarnul****Disciplineⁱ Technical informatics and telecommunications****Bibliometric indicators**

1.	Number of journal publications in WoS/ Scopus	46/62
2.	Citations (WoS/Scopus) excluding self-citations	62/95
3.	Hirsch index (WoS/Scopus)	8/9
4.	Hirsch index in Google Scholar	12
5.	Citations in Google Scholar	526

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

2. The number of PhD students currently supervised: 4

3. Are you currently accepting new PhD students:

- a. Polish Yes
- b. Foreign Yes

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

His research interests include:

- high performance computing (HPC): parallel and distributed processing including clusters, accelerators, coprocessors, hybrid CPU+accelerator systems, practical applications
- scheduling especially performance and energy oriented,
- parallelization and optimization of algorithms,
- distributed systems (cloud, grid, volunteer, service oriented systems, mixed systems),
- architectures of distributed systems,
- programming mobile devices,
- big data, large-scale computations,
- IoT.

He is an author of over 80 publications in the area of parallel and distributed processing, including HPC systems. Laureate of national (6) and international (3) prizes. He was a PI or participated in 16 research, didactic or organizational projects – national and international, in particular is/was a PI of projects:

- Development of efficient implementation of the get_range function for a key value store, from Sep 2018, , Principal Investigator, financed by Intel Technology Poland
- Optimization of persistent memory MPI I/O API and assessment of suitability of persistent memory for selected parallel applications, from April 2016, Principal Investigator, financed by Intel Technology Poland
- Modeling efficiency, reliability and energy consumption of multilevel parallel HPC systems using CPUs and GPUs, July 2013-Jan 2016, sponsored by National Science Centre, Poland, no. 2012/07/B/ST6/01516

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Funding or special equipment needed to carry out a PhD project ⁱⁱⁱ:

1. Is funding available for experimental work: Not applicable
2. Is the equipment needed to complete a PhD project available in your lab/department: Yes

Most recent publications in WoS/SCOPUS journal – no more than 5 published after 1.01.2017

No	Authors/title/journal	Journal IF/Quartile – for WoS and SNIP/ CiteScore for SCOPUS	Publication year
1.	Pawel Czarnul, Jaroslaw Kuchta, Mariusz R. Matuszek, Jerzy Proficz, Pawel Rosciszewski, Michal Wójcik, Julian Szymanski: MERPSYS: An environment for simulation of parallel application execution on large scale HPC systems. Simulation Modelling Practice and Theory 77: 124-140 (2017)	2.239/Q1	2017
2.	Pawel Czarnul: Benchmarking Performance of a Hybrid Intel Xeon/Xeon Phi System for Parallel Computation of Similarity Measures Between Large Vectors. International Journal of Parallel Programming 45(5): 1091-1107 (2017)	0.923/Q3	2017
3.	Pawel Czarnul: Parallelization of large vector similarity computations in a hybrid CPU+GPU environment. The Journal of Supercomputing 74(2): 768-786 (2018)	1.495/Q2	2018
4.	Lukasz Jarzabek, Pawel Czarnul: Performance evaluation of unified memory and dynamic parallelism for selected parallel CUDA applications. The Journal of Supercomputing 73(12): 5378-5401 (2017)	1.495/Q2	2017
5.	Tomasz Gajger, Pawel Czarnul: Modelling and simulation of GPU processing in the MERPSYS environment. Scalable Computing: Practice and Experience 19(4): 401-422 (2018)	Emerging sources citation index	2018

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

No	Project title, the name of the Princ. Investigator (PI) and the institution the project was carried out	Year awarded	Role in the project
1.	Optimization of persistent memory MPI I/O API and assessment of suitability of persistent memory for selected parallel applications	2016	PI
2.	Development of efficient implementation of the get_range function for a key value store	2018	PI

PhD Advisor form

3.	Software development for efficient use of persistent memory of individual cluster nodes in HPC parallel applications	2014	PI
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Additional relevant information – (no more than 1600 characters)^{iv}

I am the author of books:

P. Czarnul. Parallel Programming for Modern High Performance Computing Systems. 2018, Taylor&Francis. ISBN 9781138305953

P. Czarnul. Integration of Services into Workflow Applications. 2015, Taylor&Francis. ISBN 9781498706469

My students have obtained several awards, including:

- Second place in a competition organized by the Gdansk chapter of IEEE in computer science for thesis by Tomasz Gajger entitled "Modeling parallel processing with GPU and verification using the MERPSYS platform", 2018
- Thesis of the year 2017 for Piotr Tybura and thesis "Implementation of a graphical sequence based on path tracing performed in parallel on a CPU and GPU", Gdansk University of Technology
- distinction in the XXXIII national contest for the best master's thesis in computer science organization by the Polish Society of Informatics for thesis by Łukasz Jarząbek entitled "Performance and flexibility of programming with unified memory and dynamic parallelism compared to a traditional approach using CUDA"

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 300 words

ⁱⁱⁱ Leave only one answer

^{iv} Add any other relevant information eg. awards for PHD students whom you supervised (no more than 200 words)