

Prospective supervisor's form

Name of the supervisor: Jan Wajs

Academic title: DSc, PhD, MEng

Orcid ID number: <https://orcid.org/0000-0002-3099-5972>

Faculty of Mechanical Engineering

Gdańsk University of Technology Department of Energy and Industrial Apparatus

Phone: +48 583472830

E-mail: jan.wajs@pg.edu.pl

Personal web page: https://pg.edu.pl/web/dc7b367cfb_jan.wajs

Discipline: mechanical engineering [IME] environmental engineering, mining and po

Optional

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

heat transfer enhancement

heat exchangers

polygeneration systems

thermodynamic analysis

Bibliometric indicators

1. Number of journal publications in WoS/ Scopus 31 / 42

2. Citations excluding self-citations WoS 149 Scopus 172

3. Hirsch index WoS 9 Scopus 9

1. The number of PhD students who have graduated under your supervision: 2

2. The number of PhD students currently supervised:

a. within the current doctoral school 0

b. within doctoral studies (previous system 2

3. Are you currently accepting new PhD students:

a. Polish Yes/No Yes

b. Foreign Yes/No No

Prospective supervisor's form

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

Scientific interests include: heat transfer by boiling and condensation in conventional and minichannel flows; methods of heat transfer intensification with application in modern compact heat exchangers; development of high performance heat exchangers; cogeneration / trigeneration systems for distributed energy sources (based on fossil fuels and renewable energy sources), micro-CHP with organic Rankine cycle application, high-temperature heat pump, recovery systems for utilization of waste heat from technological and energy processes.

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

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

Yes

2. Is the equipment needed to complete a PhD project

available in your lab/department: *Yes/No/not needed*

Yes

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.	Wajs J., Golabek A., Bochniak R., Mikielwicz D. / Air-cooled photovoltaic roof tiles as an example of the BIPVT system – An experimental study on the energy and exergy performance / <i>Energy</i> / 2020, vol. 197, art no. 117255, doi: 10.1016/j.energy.2020.117255	200	2020
2.	Wajs J., Bajor M., Mikielwicz D. / Thermal-hydraulic studies on the shell-and-tube heat exchanger with minijets / <i>Energies</i> / 2019, vol. 12, issue 17, art. No. 3276, doi: 10.3390/en12173276	140	2019

Prospective supervisor's form

3.	Mikielewicz D., Wajs J. / Performance of the very high-temperature heat pump with low GWP working fluids / Energy / 2019, vol. 182, pp. 460-470, doi: 10.1016/j.energy.2019.05.203	200	2019
4.	Wajs J., Golabek A., Bochniak R. / Photovoltaic roof tiles: The influence of heat recovery on overall performance / Energies / 2019, vol. 12, issue 21, art. No. 4097, doi: 10.3390/en12214097	140	2019
5.	Wajs J., Mikielewicz D., Jakubowska B. / Performance of the domestic micro ORC equipped with the shell-and-tube condenser with minichannels / Energy / 2018, vol. 157, pp. 853-861, doi: 10.1016/j.energy.2018.05.174	200	2018

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.	The development of an innovative, ecological refrigeration appliance designed to be applied in ships and vessels / Jan Wajs / PBUCH SA + Gdansk University of Technology as subcontractor	2019-2022	PI
2.	Micro-CHP with a high-performance turbine set developed by MAPU Sp. z o.o. as a breakthrough in the field of unconventional low-power energy / Jan Wajs / MAPU Sp. z o.o. + Gdansk University of Technology as subcontractor	2018-2020	PI
3.	Inovative trigeneration unit for production of electricity, heat and cold for distributed energy sector with reduced environmental emission / Dariusz Mikielewicz / Gdansk University of Technology and VBW Sp. z o.o.	2018-2020	R

Prospective supervisor's form

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)