

Prospective supervisor's form

Name of the supervisor: Dariusz MIKIELEWICZ

Academic title: Professor

Orcid ID number: <https://orcid.org/0000-0001-8267-7194>

Gdańsk University of Technology Faculty of Mechanical Engineering

Department of Energy and Industrial Apparatus

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

Optional

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

modern thermodynamic cycles

refrigeration and air-conditioning

heat recovery

supercritical heat transfer

Bibliometric indicators

1. Number of journal publications in WoS/ Scopus 69/92

2. Citations excluding self-citations WoS 465 Scopus 737

3. Hirsch index WoS 12 Scopus 13

1. The number of PhD students who have graduated under your supervision: 12

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

1. modern thermodynamic Brayton cycles
2. negative CO₂ power plants
3. supercritical heat transfer
4. high temperature heat pumps
5. heat recovery from industrial processes and low-temperature heat carriers
6. carbon dioxide utilisation technologies

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 tile as an example of the BIPVT system – An experimental study on the energy and exergy performance; Energy	200	2020
2.	Jakubowska, B., Mikielwicz, D., Klugmann, M. , Experimental study and comparison with predictive methods for flow boiling heat transfer coefficient of HFE7000, International Journal of Heat and Mass Transfer, Volume: 142, 118307	200	2019

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3.	Mikielewicz, D., Kosowski, K., Tucki, K., (...), Orynycz, O., Włodarski, W. , Gas turbine cycle with external combustion chamber for prosumer and distributed energy systems, <i>Energies</i> , 12(18),3501	140	2019
4.	Mikielewicz D., Wajs J., Performance of the very high-temperature heat pump with low GWP working fluids, <i>Energy</i> , 182, pp. 460-470	200	2019
5.	Mikielewicz J., Mikielewicz D., A simplified energy dissipation based model of heat transfer for post –dryout flow boiling, <i>Int. Journal of Heat and Mass Transfer</i> 124 (2018) 260–268.	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 ⁱ
1.	Projekt NCN: UMO-2017/25/B/ST8/00755; Wymiana ciepła i opory przepływu podczas wrzenia w minikanalach nowych czynników chłodniczych przy parametrach bliskich termodynamicznemu punktowi krytycznemu;	2018-2021	PI
2.	Projekt NCBiR: POIR.04.01.02-00-0018/17; INNOECOTRIBLOK: Innowacyjne urządzenie trigeneracyjne do produkcji energii elektrycznej i chłodu dla energetyki rozproszonej o obniżonej emisji środowiskowej;	2018-2021	PI
3.	Projekt Interreg South Baltic: STHB.01.02.00-DK-0086/16; BioBIGG: Bioeconomy in the South Baltic Area: Biomass-based Innovation and Green Growth	2017-2020	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)