

Prospective supervisor's form

Name of the supervisor:

Academic title:

Orcid ID number: <https://orcid.org/0000-0003-1424-0403>

Gdańsk University of Technology Faculty of

Department of

Phone: +48

E-mail:

Personal web page: <https://pg.edu.pl/>

Discipline:

Optional

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

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Bibliometric indicators

1. Number of journal publications in WoS/ Scopus

2. Citations excluding self-citations WoS Scopus

3. Hirsch index WoS Scopus

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

2. The number of PhD students currently supervised:

a. within the current doctoral school

b. within doctoral studies (previous system)

3. Are you currently accepting new PhD students:

a. Polish Yes/No

b. Foreign Yes/No

Prospective supervisor's form

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

Research topics include the use of organic carbon sources to improve the kinetics of biochemical processes occurring in activated sludge bio-reactors of municipal wastewater treatment plants, according to the European Union (EU) activities Circular Economy and so far was implemented within the research project of the priority axis of the Operational Program Innovative Economy (the "Bio" thematic group). In addition, scientific interests include the use of mathematical modeling and computer simulation of activated sludge processes along with the development of "Good Modeling Practice" both in the design and control of wastewater treatment in daily operation, which translates into significant energy savings / recovery of raw materials and financial benefits.

RESEARCH PROJECTS:

Innovative technologies for nutrient removal and recovery from wastewater

Technologies of energy and raw materials recovery from wastewater

Improving energy balance at wastewater treatment plants

Mathematical modelling and computer simulations of wastewater treatment processes

Energy optimization and financial benefits at wastewater treatment plants

Soft sensor application considering the technological and economical aspects of smart systems/cities

Greenhouse gases emissions at wastewater treatment plants

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.	Drewnowski, J., Szeląg, B., Xie, L., Lu, X., Ganesapillai, M., Deb, C.K., Szulzyk-Cieplak, J., Łagód, G. (2020). The influence of COD fraction forms and molecules size on hydrolysis process developed by comparative OUR studies in activated sludge modelling. <i>Molecules</i> Vol. 25, Issue 4, 19 February 2020, Article number 929	100	2020
2.	Szeląg, B., Drewnowski, J., Łagód, G., Majerek, D., Dacewicz, E., Fatone, F. (2020). Soft sensor application in identification of the activated sludge bulking considering the technological and economical aspects of smart systems functioning. <i>Sensors</i> Vol. 20, Issue 7, Article number 1941	100	2020

Prospective supervisor's form

3.	Drewnowski, J. (2019). Advanced supervisory control system implemented at full-scale WWTP-A case study of optimization and energy balance improvement. Water, Vol. 11, Issue 6, Article number 1218	70	2019
4.	Kopec, L., Kopec, A., Drewnowski, J. (2019). The application of Monod equation to denitrification kinetics description in the moving bed biofilm reactor (MBBR). International Journal of Environmental Science and Technology. Vol.16, Issue 3, pp.1479-1486	70	2019
5.	Drewnowski, J., Makinia, J., Kopec, L., Fernandez-Morales, F.-J. (2018). Modelization of nutrient removal processes at a large wwtp using a modified ASM2d model International Journal of Environmental Research and Public Health. Vol. 15, Issue 12, Article number 2817	70	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.	Project SONATA-13 title "Factors affecting the competitiveness of the functionally different nitrification bacteria AOB-NOB in shortcut nitrogen removal systems" financially supported by National Science Centre in Poland. The research project carried out in Gdansk University of Technology. PI Jakub Drewnowski	2018-2021	PI
2.	The research project title "One Belt, One Road" under Poland-China Shanghai international collaboration project (17230741000). The research project carried out in Tongji University in Shanghai and Gdansk University of Technology. PI Jakub Drewnowski	2017-2019	PI
3.	Ministry of Science and Higher Education in Poland, within the statutory research of particular scientific topics title "Aided computer optimization of activated sludge processes on the example of a wastewater treatment plant" under subvention for a science program dedicated to Gdansk University of Technology. PI Jakub Drewnowski	2016-2017	PI

Prospective supervisor's form

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

More than 110 publications (10 individual and rest as co-authors) have so far been published by Prospective Supervisor's and his team. Among them, 20 publications renowned at home and foreign peer-reviewed journals (around 25 articles in JCR journals, list A and the Web of Science) and more than 50 papers and posters (mostly at the prestigious International Water Association Conferences) presented in 14 countries around the world including: Australia, USA, Canada, Russia, Portugal, Hungary, Germany, Denmark, Greece, Poland, Belarus, Ukraine, Serbia, Norway. For scientific activity he and his team has so far received more than 20 awards / distinctions including scholarships and nominations both in Poland and abroad. In addition, scientific achievements include 1 patent application, 5 implementations, 3 innovative solutions and 2 chapters in Polish monograph, 2 chapters in monograph and 1 international English book and numerous reports, scientific papers and research reports, expertise, including participation in the implementation of 10 scientific projects (i.e. MNSW, Norwegian Funds and EU). In addition to academic achievements by Prospective Supervisor's is a Professional Engineer and has a practice knowledge in building and design manage construction works without restrictions in the installation specialty in the field of networks, installations and devices for heating, ventilation, gas, water and sewage Upr. POM / 0233 / PWOS / 09, Gdańsk. Moreover he is President of the Polish Section IWA YWP, Secretary of IWA POLAND, Co-Chairman of the Scientific Society of Gdańsk.

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)