

Prospective supervisor's form

Name of the supervisor: Henryk Krawczyk

Academic title: Prof. in Computer Science

Orcid ID number: <https://orcid.org/0000-0003-0436-6264>

Gdańsk University of Technology Faculty of Electronics, Telecommunication and Informatics

Department of Computer System Architecture

Phone: +48 693 365 132

E-mail: hkrawk@pg.edu.pl

Personal web page: <https://pg.edu.pl/> https://pg.edu.pl/950a4152c2_henryk.krawczyk

Discipline: technical informatics and telecommunicator none

Optional

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

Distributed Systems and Applications

Software Engineering

IT Platforms and Technologies

Scalability and Dependability

Bibliometric indicators

1. Number of journal publications in WoS/ Scopus 74/112

2. Citations excluding self-citations WoS 141 Scopus 272

3. Hirsch index WoS 5 Scopus 9

1. The number of PhD students who have graduated under your supervision: 27

2. The number of PhD students currently supervised:

a. within the current doctoral school 0

b. within doctoral studies (previous system 3

3. Are you currently accepting new PhD students:

a. Polish Yes/No Yes

b. Foreign Yes/No Yes

Prospective supervisor's form

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

Distributed systems and applications play important role in our modern society. Key technologies such as Cloud computing, Big data and Internet of Everything stimulate development of various categories of IT services and IT applications. Based on SOSE (Service Oriented Software Engineering) we work on the specific kind of services called SMART ones. The letters of word SMART have the following meanings: S – self-improving, M – maximal efficient, A- adaptive to context, R – real-time processed, T – totally secure. The suitable methodology to design and develop such a kind of services is under development in one of the center of Gdańsk University of Technology. It is Centre of Informatics Tri-City Academic Supercomputer and network (briefly CI TASK) where TASKCloud was built and it is still improved in order to offer SMART services. The suitable platform to create such services is going to implement (WIKI Web Services) and test. Moreover, smart services are the base to define and create different computing scenarios capable to analyze available sets of big data related to scientific records such as weather forecasting, human tissue descriptions or human intuition and wisdom models.

The areas offered for PhD research are as follows:

1. Design of SMART services for analysis big data repositories.
2. Improving SOSE methodology in respect to SLA (Software Level Agreement) for Cloud computing
3. Modelling of intuition aspects by AI (Artificial Intelligence) algorithms run on HPC systems.

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

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.	Blokus Adam, Henryk Krawczyk: Systematic Approach to Binary Classification of Images in Video Streams using Shifting Time Windows. Signal, Image and Video Processing 4,2018	70	2018
2.			

Prospective supervisor's form

3.			
4.			
5.			

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.	Creation of Gdansk Competence Centre for Smart and Transdisciplinary knOwledge Services in scope of R&D infrastructure, Project CK STOS RPPM.01.02.00-22-0001/17	2019-2021	PI
2.	The Centre of Excellence for Novel Infrastructure of Workable Applications Project NIWA POIG.02.03.00-22-059/13+ Panda2, 2013-2015+2016-2021	2013-2021	PI
3.	Intelligent Component of Recommendation for Cloud Computing, Project KRICO INNOTECH K3/IN3/20/227103/NCBR/14	2014-2017	PI

Prospective supervisor's form

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

Three of my PhD students arrived from abroad, five of them were delegated from The Intel Technology Poland and eight of them came from business, others still work at Polish universities or research institutions.

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)