

# Prospective supervisor's form

Name of the supervisor

Academic title:

Orcid ID number: [https://orcid.org/0000-](https://orcid.org/0000-0001-9427-7649)

Gdańsk University of Technology Faculty of

Department of

Phone: +48

E-mail:

Personal web page: [https:// pg.edu.pl/](https://pg.edu.pl/04e299w28c_krzysztof.nyka)

Discipline<sup>1</sup>

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

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### Research interests or topics offered for PhD research (no more than 2000 characters)<sup>ii</sup>

1. Antennas for 5G communication systems and radars up to millimeter wave range (up to 70 GHz), including reconfigurable antennas having switched radiation patterns and electronically steerable antenna arrays.
2. Radio identification in UHF and millimeter-wave ranges using passive electronic and chipless tags.
3. Security and privacy improvement of wireless communication in physical layer using directional modulation
4. Localization in wireless sensor networks for IoT systems based on integrated transceiver modules, e.g. Bluetooth 5.1
5. Tools and methods of hardware emulation of radio links based on realistic propagation models
6. Reconfigurable antenna systems for localization and quality improvement and interference immunity of radio links in IoT systems.
7. Antennas and communication subsystems for CubeSat nanosatellites.

### Funding or special equipment needed to carry out a PhD project <sup>iii</sup>:

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

2. Is the equipment needed to complete a PhD project available in your lab/department: *Yes/No/not needed*

### 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.	M. Groth, M. Rzymowski, K. Nyka, L. Kulas, "ESPAR Antenna-Based WSN Node with DoA Estimation Capability", IEEE Access, 2020 (accepted)	100	2020
2.	K. Nyka "Diagonalized Macromodels in Finite Element Method for Fast Electromagnetic Analysis of Waveguide Components". Electronics 2019, 8, 260.	100	2019

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3.	G. Fotyga, K. Nyka and M. Mrozowski, "Automatic Reduction-Order Selection for Finite-Element Macromodels," IEEE Microwave and Wireless Components Letters, vol. 28, no. 4, pp. 278-280, April 2018	100	2018
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 <sup>i</sup>
1.	BEYOND5 – Building the fully European supply chain on RFSOI, enabling New RF Domains for Sensing, Communication, 5G and beyond, HORIZON 2020, project number: 876124	2020-23	PI
2.	Productive 4.0 - Electronics and ICT as enabler for digital industry and optimized supply chain management covering the entire product lifecycle, the name of the financing program: HORIZON 2020, project number: 737459	2017-20	PI
3.	Arrowhead Tools – Arrowhead Tools for Engineering of Digitalisation Solutions, HORIZON 2020, project number: 826452	2019-22	PI

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**Additional relevant information – (no more than 1600 characters)<sup>v</sup>**

IEEE Senior Member  
Chairman of IEEE AP/AES/MTT Joint Chapter, Poland Section, term 2020-21

- <sup>i</sup> You may select up to two disciplines out of 12 disciplines represented in the Doctoral School
- <sup>ii</sup> Observe the limit of not more than 2000 characters
- <sup>iii</sup> Leave only one answer
- <sup>iv</sup> 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
- <sup>v</sup> Add any other relevant information e.g. awards for PhD students whom you supervised (no more than 1600 characters)