Prospective supervisor's form

Name of the supervisor: Piotr J. Chrzan

Academic title: Professor

Orcid ID number: https://orcid.org/000 0002-9144-826X

Faculty of Electrical and Control Engineering

Gdańsk University of Technology **Department of** Power Electronics and Electrical Machines

Phone: **+48** 608 318 616

E-mail: pchrzan@pg.edu.pl

Personal web page: https://pg.edu.pl/ pchrzan

Discipline[i] control, electronic and electrical engineering none

Optional

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

soft-switching converters

EMI mitigation

GaN power transistors

Converter fed electrical drives

Bibliometric indicators

1. Number of journal publications in WoS/ Scopus 11/13
2. Citations excluding self-citations WoS 90 Scopus 157
3. Hirsch index WoS 5 Scopus 6

1. The number of PhD students who have graduated under your supervision: 6
2. The number of PhD students currently supervised:
   a. within the current doctoral school
   b. within doctoral studies (previous system) 1
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]

Optimization design methods of power converters with reduced electromagnetic interference emission; Soft-commutated high-frequency power electronic converters; Reliability issues of power converteres for traction drives in low-emission transport

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.	Turzyński M., Chrzan P.J.: Resonant DC link inverters for AC motor drive systems – critical evaluation., Bulletin of the Polish Academy of Sciences Technical Sciences, vol. 67, no. 2, 2019, s. 241-252.	100	2019
2.	Kolincio M., Chrzan P.J., Musznicki P.: Multitransformer Primary-Side Regulated Flyback Converter for Supplying Isolated IGBT and MOSFET Drivers. IEEE Transactions on Industrial Electronics. vol. 67, no. 2, Feb 2020, s. 1005-1012	200	2020

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3.	Turzyński M., Chrzan P.J.: Reducing common mode voltage and bearing currents in quasi - resonant DC - link inverter. IEEE Transactions on Power Electronics. Early access paper DOI: 10.1109/tpel.2020.2969495	200	2020
4.	Derkacz P.B., Musznicki P., Chrzan P.J.: EMI Attenuation in a DC-DC buck converter using GaN HEMT. IEEE Journal of Emerging and Selected Topics in Power Electronics, Early access paper DOI: 10.1109/JESTPE.2020.2987638	140	2020
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.	DORNA (Development of high reliability motor drives for next generation propulsion applications), Maria Skłodowska-Curie Actions – Research and Innovation Staff Exchange, 2020-2024	2020-24	R
2.			PI
3.			PI

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)