Name and surname:	**Jarosław Czarnecki**
Academic Degree:	dr hab. inż. (DSc.)
Institute/Department:	Institute of Agricultural Engineering
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UPWr Base of Knowledge - link:	https://bazawiedzy.upwr.edu.pl/globalResultList.seam?q=Czarnecki&oa=false&r=author&ps=20&tab=&lang=pl&pn=1&cid=87102
Researchgate:	
Personal website / Working group website:	
Participation in projects in last 5 years (chronological; with distinction into PI (kierownik) and RF (wykonawca)):	No
Do you plan to engage support of second supervisor or auxiliary supervisor?	YES
	Auxiliary supervisor
Name and surname:	Marek Brennensthul
Academic Degree:	dr inż. (Dr. Eng.)
Faculty, Institute/Department:	Institute of Agricultural Engineering
e-mail address:	marek.brennensthul@upwr.edu.pl
ORCID:	0000-0003-4964-482X
UPWr Base of Knowledge - link or most important publications from last 3 year (JCR) / patents from last 3 years (maximum 5):	Evaluation of Tire Footprint in Soil Using an Innovative 3D Scanning Method Ptak Weronika, Czarnecki Jarosław, Brennensthul Marek [i in.], Agriculture (Switzerland), 2023, vol. 13, nr 3, s.1-15, Numer artykułu:514. DOI:10.3390/agriculture13030514 Evaluation of Tires Acting on Soil in Field Conditions Using the 3D Scanning Method Ptak Weronika, Czarnecki Jarosław, Brennensthul Marek [i in.], Agriculture (Switzerland), 2023, vol. 13, nr 5, s.1-14, Numer artykułu:1094. DOI:10.3390/agriculture13051094 Evaluation of Agriculture Tires Deformation Using Innovative 3D Scanning Method Ptak Weronika, Czarnecki Jarosław, Brennensthul Marek [i in.], Agriculture (Switzerland), 2022, vol. 12, nr 8, s.1-15, Numer artykułu:1108. DOI:10.3390/agriculture12081108
Researchgate:	
Personal website / Working group website:	
Projects in last 5 years (chronological; with distinction into PI (kierownik) and RF (wykonawca)):	No
PhD topic:	Evaluation of dynamics of selected chassis on agricultural grounds in aspect of traction properties and phenomenal changes in the soil
Research discipline in Doctoral School:	Agriculture and Horticulture
Short description of the research problem to be solved in the PhD (minimum 1000 characters):	Considerations in the range of environmental protection, necessity of high efficiency at field operations and reduction of energy losses create new requirements in agricultural technique. These requirements can be realized both by new solutions in agricultural machinery and by controlled selection of technical and operational parameters of the chassis in agricultural machines. However it is known that the deformation and compaction of the soil caused by the wheels of machines cannot be completely eliminated. Minimization of these negative consequences can be realized only by exact recognition of the phenomenon between tractor tire and deformable ground. For this reason, proposed experiments will include assessment of dynamic acting of the wheels on agricultural grounds in aspect of the improvement of traction properties and reduction of negative changes as a consequence of wheel rolling. Additional aim of the research will related to develop the measuring techniques useful in filed conditions to assessment of deformation and compaction of the soil. In turn, the changes in the soil will be evaluated in real conditions instead the laboratory experiments. Obtained results will have great importance both in the scientific and practical aspects.
Professional skills for PhD candidate (e.g. master program, specializations, softwares, language, analytical techniques, minimum 500 characters):	The candidate should be the graduate of the engineering field of study (especially in the range of the subjects related to agricultural technique). The candidate should know MS Office software, graphical software (CAD), and he should have very good knowledge of the English language. The knowledge of mathematical analysis also is needed – especially in the range of statistical software. The candidate should be disciplined in individual and team work. Moreover, the candidate should be ready to travel to other research centres in the country and abroad.
a) Project title:	0
b) Agreement number:	0
c) Number of months in the project to support PhD student (in months; starting from 1st of October 2024):	0
Project website:	