

Candidate supervisor's information summary form

maximum 2 pages – it should be a summary of most important achievements

Name and surname, degree, title: Jerzy Jonczak, dr hab.	
Discipline/ disciplines of science	Agriculture and Horticulture
Professional development (degrees and titles) in chronological order	<ul style="list-style-type: none"> • mgr – 1999, Nicolas Copernicus University in Toruń • dr – 2004 – Nicolas Copernicus University in Toruń dr hab. – 2017 – Warsaw University of Life Sciences
Most important publications/patens over the last 3 years (maximum 10)	<ul style="list-style-type: none"> • Jonczak J., Jankiewicz U., Kondras M., Kruczkowska B., Oktaba L., Oktaba J., Olejniczak I., Pawłowicz E., Polláková N., Raab T., Regulska E., Słowińska S., Sut-Lohmann M. 2020. The influence of birch trees (<i>Betula</i> spp.) on soil environment – A review. <i>Forest Ecology and Management</i> 477: 1-13. • Sut-Lohmann M., Jonczak J., Parzych A., Šimanský V., Polláková N., Raab T. 2020. Accumulation of airborne potentially toxic elements in <i>Pinus sylvestris</i> L. bark collected in three Central European medium-sized cities. <i>Ecotoxicology and Environmental Safety</i>, 200 • Šimanský V., Jonczak J. 2020. Aluminium and iron oxides affect the soil structure in a long-term mineral fertilised soil. <i>Journal of Soils and Sediments</i>, 20: 2008-2018. • Parzych A., Jonczak J., Sobisz Z., Woziwoda B. 2020. The influence of plants on water quality in stream flowing through of mid-forest spring niche. <i>Desalination and Water Treatment</i> 186: 350-360. • Sut-Lohmann M., Jonczak J., Raab T. 2020. Phytofiltration of chosen metals by aquarium liverwort (<i>Monosoleum tenerum</i>). <i>Ecotoxicology and Environmental Safety</i> 188 • Kruczkowska B., Błaszkiwicz M., Jonczak J., Uzarowicz Ł., Moska P., Brauer A., Bonk A., Słowiński M. 2020. The Late Glacial pedogenesis interrupted by aeolian activity in Central Poland – Records from the Lake Gościąg catchment. <i>Catena</i> 185. • Jonczak J., Florek W., Kruczkowska B., Gadziszewska J., Niska M., Uzarowicz Ł. 2019. Late Vistulian and Holocene development of litho-morpho-pedogenic processes in the southern Baltic coastal zone: A case study from Dębina, northern Poland. <i>Geoderma</i> 348: 21-36. • Šimanský V., Juriga M., Jonczak J., Uzarowicz Ł., Stępień W. 2019. How relationships between soil organic matter parameters and soil structure characteristics are affected by the long-term fertilization of a sandy soil. <i>Geoderma</i> 342: 75-84. • Kruczkowska B., Jonczak J., Gadziszewska J., Niska M., Florek W., Degórski M. 2019. The record of postglacial

	<p>environmental changes of the southern Baltic coastal zone in the sequence of fossil soils. <i>Journal of Soils and Sediments</i> 19(2): 848-861.</p> <ul style="list-style-type: none"> • Kabała C., Charzyński P., Chodorowski J., Drewnik M., Glina B., Greinert A., Hulisz P., Jankowski M., Jonczak J., Łabaz B., Łachacz A., Marzec M., Mazurek R., Mendyk Ł., Musiał P., Musielok Ł., Smreczak B., Sowiński P., Świtoniak M., Uzarowicz Ł., Waroszewski J. 2019. <i>Systematyka Gleb Polski</i>, wydanie 6. Wydawnictwo Uniwersytetu Przyrodniczego we Wrocławiu.
Experience in work with doctoral students (defended doctoral dissertations, doctoral programmes opened) in chronological order	<ul style="list-style-type: none"> • Supervisor of PhD thesis of mgr inż. Krzysztof Sztabkowski; open doctoral dissertation at the Forest Research Institute in 2018; thesis topic: The influence of litho-morphogenetic factors on the development and properties of Brunic Arenosols within the Vistula glaciation range
Project/grants achievements (from the last 10 years)	<ul style="list-style-type: none"> • PI of the project entitled „Transformation of post-arable soils due to afforestation with birch”; NCN OPUS, project no. 2018/31/B/NZ9/01994; realization during 2019-2022 • Investigator in the project entitled „Environmental impact of charcoal production in N Poland – an innovative multiproxy approach”; NCN OPUS, project no. 2018/31/B/ST10/02498; realization during 2019-2022
Topic – research problem – for which the candidate supervisor seeks a doctoral student	<p>Topic:</p> <p>Evaluation of the fertilizing value of the digestate obtained as a result of non-supported and biochar-supported metagenization of effluents after microbial hydrogen production</p> <p>Research problem:</p> <p>The research aims to assess the fertilization value of the digestate obtained by the two-stage decomposition of sugar industry by-products, including microbial hydrogen production and metagenization. The two-stage production of gases from biomass, which is a by-product of the food industry, is an innovative technology that is being tested. At the same time, preliminary studies on supporting this process by biochar are carried out. The main by-product of the process is digestate, which constitutes a mixture of substrates (sewage sludge) and catalyst (biochar). One of the options for its use is application as fertilizer. However, suitable research, which will be the subject of the planned doctoral dissertation is required in this field.</p>
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