

**Candidate supervisor's information summary form**  
maximum 2 pages – it should be a summary of most important achievements

Name and surname, degree, title: Marcin Studnicki, PhD	
Discipline/ disciplines of science	agriculture and horticulture
Professional development (degrees and titles) in chronological order	2018 – habilitation 2012 – PhD in agriculture
Most important publications/patens over the last 3 years (maximum 10)	<ol style="list-style-type: none"> <li>1. Sobczyński, G.; Studnicki, M.; Mađry, W.; Wijata, M.; Gozdowski, D.; Noras, K.; Samborski, S.; Rozbicki, J. 2020. Impact of cultivar and environment soil suitability on the contribution of yield components to grain yield variation in spring wheat. <i>Crop Science</i>, 60, 428–440 IF=1,658</li> <li>2. Studnicki, M.; Dębski, K.; Stępkowski, D. 2019. Proportions of macronutrients, including specific dietary fats, in prospective anti-Alzheimer's diet. <i>Scientific Reports</i>, (9), 1–8. IF=4,011</li> <li>3. Studnicki, M.; Lenartowicz, T.; Noras, K.; Wójcik-Gront, E.; Wyszyński, Z. 2019. Assessment of stability and adaptation patterns of white sugar yield from sugar beet cultivars in temperate climate environments. <i>Agronomy</i> 9, 405 IF=2,259</li> <li>4. Studnicki, M.; Kang, M.S.; Iwańska, M.; Oleksiak, T.; Wójcik-Gront, E.; Mađry, W. 2019. Consistency of Yield Ranking and Adaptability Patterns of Winter Wheat Cultivars between Multi-Environmental Trials and Farmer Surveys. <i>Agronomy</i> 9, 245. IF=2,259</li> <li>5. Kosma M., Studnicki M., Wójcik-Seliga J., Michalska-Klimczak B., Wyszyński Z., Wójcik-Gront E. 2019. Over-dispersed count data in crop and agronomy research. <i>Journal of Agronomy and Crop Science</i>. In press IF=2,578</li> <li>6. Studnicki M., Derejko A., Wójcik-Gront E., Kosma M. 2019. Adaptation patterns of winter wheat cultivars in agro-ecological regions. <i>Scientia Agricola</i>, 76(2), 148–156. IF = 1,103</li> <li>7. Golba J., Studnicki M., Gozdowski D., Mađry W., Rozbicki J. (2018). Influence of genotype, crop management, and environment on winter wheat grain yield determination based on components of yield. <i>Crop Science</i>, 58(2), 660-669. IF=1,658</li> <li>8. Studnicki M., Wijata M., Sobczyński G., Samborski S., Rozbicki J. 2018. Assessing grain yield and quality traits stability of spring wheat cultivars at different crop management levels. <i>Cereal Research Communications</i>, 46(1), 180-190. IF=0.528</li> <li>9. Studnicki M., Paderewski J., Piepho H.P., Wójcik-Gront E. 2017. Prediction accuracy and consistency in cultivar ranking for factor-analytic linear mixed models for winter wheat multienvironmental trials. <i>Crop Science</i>, 57(5), 2506-2516. IF=1,658</li> </ol>
Experience in work with doctoral students (defended doctoral dissertations, doctoral programmes opened) in chronological order	<p>Michał Kosma – supervisor – doctoral programmes opened 2019</p> <p>Magdalena Wijata – assistant supervisor – defended doctoral dissertations - 2018</p> <p>Kinga Noras – assistant supervisor - defended doctoral dissertations - 2016</p>

Project/grants achievements (from the last 10 years)	
Topic – research problem – for which the candidate supervisor seeks a doctoral student	<p>Topic: Assessment of spatial diversity and identification causes of yield gap for cereals.</p> <p>Current and detailed studies on the yield gap and its spatial variability for modern varieties of cereals in Poland and in the warm-summer humid continental climate zone, as well as precise knowledge about the yield difference between potential yield and farmer's actual yield named yield gap are still lacking. In order to evaluate the spatial variability of yield gap, the potential yield should be assessed first. As a part of this research, we will use two approaches to assess the potential yield. The first one of these is the use of crop models. The second method of assessing the potential yield is the use of experiments called multi-environmental trials METs. In order to evaluate spatial variability of yield gap, the actual yield should be assessed. In this case, it will be based on the current data from the Polish Central Statistical Office and other surveys. Based on this information the yield gap will be determined. For this purpose, geostatistical methods and image processing tools will be used. The next task will be to search for the cause and factors shaping magnitude and spatial variability of yield gap for individual cereal species in Poland. This will be done using the extended set of variables accumulated during the determination of the actual yield and information about the weather and soil properties. In order to select from among the above presented variables those that significantly affect the magnitude and spatial variation yield gap will be applied neural networks and artificial intelligence analytical methods.</p>
<u>Contact details:</u> Faculty/Institute E-mail address Tel.	Institute of Agriculture Department of Biometry <a href="mailto:marcin_studnicki@sggw.edu.pl">marcin_studnicki@sggw.edu.pl</a> 22 59 32 727