

### Candidate supervisor's information summary form

Name and surname, degree, title: Dr hab. Jarosław Chormański, prof. SGGW	
Discipline/ disciplines of science	<ol style="list-style-type: none"> <li>1. Environmental engineering, mining and energy</li> <li>2. Civil engineering and transport</li> </ol>
Professional development (degrees and titles) in chronological order	<p><b>1994 - MSc</b> in Earth Science / Physical Geography /Hydrology, Sedimentology; Warsaw University Fac. Geography and Regional Studies</p> <p><b>2003, PhD</b> in Agricultural Science / Environmental Engineering, Warsaw University of Life Science – SGGW, Fac. Civil and Environmental Eng.</p> <p><b>2014, Postdoc. habilitation</b> in Technical Science/ Environmental Engineering, Technical University of Warsaw Fac. Environmental Eng.</p>
Most important publications/patens over the last 3 years (maximum 10)	<ol style="list-style-type: none"> <li>1. Ciężkowski, .; Kleniewska, M.; Chormański, J. 2020 Thermal and Optical Indices for Wetland Habitats, are They Showing the Same Thing? JSTARS, 13, 3951-3957</li> <li>2. Demarchi, L.; Kania, A.; Ciężkowski, W.; Piórkowski, H; Oświecimska-Piasko, Z.; Chormański, J. 2020 Recursive Feature Elimination and Random Forest Classification of Natura 2000 Grasslands in Lowland River Valleys of Poland Based on Airborne Hyperspectral and LiDAR Data Fusion. Remote Sens., 12 (11), 1842</li> <li>3. Barrios, J.M.; Arboleda, A.; cDe Pue, J.; Chormański, J.; Gellens-Meulenberghs, F. 2020 Continuous Daily Evapotranspiration with Optical Spaceborne Observations at Sub-Kilometre Spatial Resolution. Remote Sens., 12 (14), 2218.</li> <li>4. Ciężkowski, W.; Szporak-Wasilewska, S.; Kleniewska, M.; Józwiak, J.; Gnatowski, T.; Dąbrowski, P.; Górąj, M.; Szatyłowicz, J.; Ignar, S.; Chormański, J. 2020 Remotely Sensed Land Surface Temperature-Based Water Stress Index for Wetland Habitats. Remote Sens., 12, 631.</li> <li>6. Sikorska D., Ciężkowski W., Babańczyk P., Chormański J., and Sikorski P., Intended wilderness as a Nature-based Solution: Status, identification and management of urban spontaneous vegetation in cities, „Urban Forestry and Urban Greening”, 2021, t.62, pp. 1–13.</li> <li>7. Chormański J., Nowicka B., Wieckowski A., Ciupak M., Józwiak J., and Figura T., Coupling of Dual Channel Waveform ALS and Sonar for Investigation of Lake Bottoms and Shore Zones, „Remote Sensing”, 2021, t.13, pp. 1–27.</li> <li>8. Piotr Sikorski, Beata Gawryszewska, Daria Sikorska, Jarosław Chormański, Axel Schwerk, Agata Jojczyk, Wojciech Ciężkowski, Piotr Archiciński, Łepkowski Maciej, Izabela Dymitryszyn, Arkadiusz Przybysz, Marzena Wińska-Krysiak, Barbara Zajdel, Jarosław Matusiak, Edyta Łaszkiwicz. 2021; The value of doing nothing – How informal green spaces can provide comparable ecosystem services to cultivated urban parks. Ecosystem Sevices. 50, 1-12</li> </ol>

	<p>9. da Silva, A.R., Demarchi, L., Sikorska, D., et al. 2022. Multi-source remote sensing recognition of plant communities at the reach scale of the Vistula River, Poland. <i>Ecological Indicators</i> 142, 1–10.</p> <p>10. Mielczarek D., Sikorski P., Archiciński P., Ciężkowski W., Zaniewska E., and Chormański J., The Use of an Airborne Laser Scanner for Rapid Identification of Invasive Tree Species <i>Acer negundo</i> in Riparian Forests, „Remote Sensing”, 2022, t.15, pp. 1–19.</p>
Experience in work with doctoral students (defended doctoral dissertations, doctoral programmes opened) in chronological order	<p><b>defended doctoral dissertations</b></p> <p>Tomasz Berezowski (Vrije Universitat Brussels)</p> <p>Wojciech Ciężkowski (WULS)</p> <p><b>doctoral programmes opened :</b></p> <p>Joanna Suliga [2018] - (Vrije Universitat Brussels/SGGW)</p>
Project/grants achievements (from the last 10 years)	<p>1.NCN OPUS: Interception-TRanspiration-EVaporation, interdependencies of hydrological processes on WETland ECOsystems INTREV-WetEco (2013-2016), Principal Investigator;</p> <p>2. NCN OPUS - MARSH-ALL – The experimental use of innovative remote sensing techniques (Pol-In-SAR, HyperSpectral) for the assessment of the selected ecohydrological elements of lowland river valleys (2013-2017), Key investigator;</p> <p>3. STEREO III (BELSPO) Earth Observation - SR/00/301 HIWET - High-resolution modelling and monitoring of water and energy transfers in wetland ecosystems (2014- 2018). Leader of Polish Research Group;</p> <p>4.7FP REFORM 2011-2015- REstoring rivers FOR effective catchment Management, Investigator;</p> <p>5.HABITARS – 2016-2019 - Innovative approach supporting monitoring of the non-forest Natura 2000 habitats – using remote sensing method. BIOSTRATEG/Edition II. Leader of Working Group, Key investigator;</p> <p>6.NCN 2018-2023 - 2017/25/B/ST10/02967 Reach-scale hydromorphological characterization of European rivers using Hyperspectral and LiDAR data acquired from airborne and UAV platforms. Principal Investigator;</p>
Topic – research problem – for which the candidate supervisor seeks a doctoral student	<p>1. Spatial (classification) and statistical (machine learning, deep learning) analysis of thermal, hyperspectral and LiDAR remote sensing data obtained from the aerial and UAV platforms, towards mapping natural habitats of river valleys, including aquatic and emergent vegetation, identification and dynamics of changes in morphological units .</p> <p>2. Integration of satellite imagery with aerial (UAV) data using the method of sharpening spatial resolution called "superresolution" in the identification of threats to agricultural crops and natural plant communities and/or identification of morphological units</p> <p>3. Blue-Green Mapping and Monitoring Platform for Sustainable Urban Development</p>
<u>Contact details:</u>	Faculty of Civil and Environmental Engineering, Institute of Environmental Engineering

Faculty/Institute	Department of Remote Sensing and Environmental Research
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