

Candidate supervisor's information summary form

Zbigniew Marek Lechowicz, Prof. DSc. Dr Eng.	
Scientific discipline	Civil Engineering, Geodesy and Transport
Professional development (degrees and titles) in chronological order	1982 – Doctor of Science, Faculty of Land Reclamation and Environmental Engineering, SGGW, geotechnics 1993 – Habilitation, Faculty of Civil and Environmental Engineering, Technical University of Gdańsk, 2004 – Professor of Sciences, Faculty of Civil and Environmental Engineering, Technical University of Gdańsk
Most important publications/ patents in the last 3 years (maximum 10)	<ol style="list-style-type: none"> 1. SULEWSKA M.J., LECHOWICZ Z. 2024: Determination of the characteristic values of the undrained shear strength of organic soils according to Eurocode 7. Archives of Civil Engineering, vol. LXX, 1, 39-52 DOI: 10.24425/ace.2024.148899. 2. LECHOWICZ Z., GOŁAWSKA K. 2023: Evaluation of deformation and strength parameters of organic soils for the design of geotechnical structures. Acta Polytechnica CTU Proceedings, 45:53–58, https://doi.org/10.14311/APP.2023.45.0053. 3. FUKUE M., LECHOWICZ Z., FUJIMORI Y., EMORI K., MULLIGAN C.N. 2023: Inhibited and Retarded Behavior by Ca²⁺ and Ca²⁺/OD Loading Rate on Ureolytic Bacteria in MICP Process. Materials, 16, 3357. https://doi.org/10.3390/ma16093357. 4. LECHOWICZ Z., SULEWSKA M.J. 2023: Assessment of Undrained Shear Strength and Settlement of Organic Soils Under Embankment Loading Using Artificial Neural Networks. Materials, 16, 125. https://doi.org/10.3390/ma16010125. 5. UTEPOV Y., LECHOWICZ Z., ZHUSSUPBEKOV A., SKUTNIK Z., ALDUNGAROVA A., MKILIMA T. 2022: The Influence of Material Characteristics on Dam Stability Under Rapid Drawdown Conditions. Archives of Civil Engineering, vol. LXVIII, 1, 539-553. DOI: 10.24425/ace.2022.140184. 6. FUKUE M., LECHOWICZ Z., FUJIMORI Y., EMORI K., MULLIGAN C.N. 2022: Incorporation of Optical Density into the Blending Design for a Biocement Solution. Materials, 15, 1951 https://doi.org/10.3390/ma15051951. 7. GAJEWSKA B., GAJEWSKI M., LECHOWICZ Z. 2021: Parametric Studies of the Load Transfer Platform Reinforcement Interaction with Columns. Materials, 14, 4015, https://doi.org/10.3390/ma14144015.
Experience in work with doctoral students (defended doctoral dissertations, initiated doctoral programmes/procedures) in chronological order	<p><i>Supervision of PhD theses completed:</i></p> <ol style="list-style-type: none"> 1. Timoth Mkilima, Tanzania, Africa, Ph.D. Student of the L.N. Gumilyov Eurasian National University (Kazakhstan) “Aspects of embankment dam stability considering the effect of land use changes and climatic conditions in catchments” (prof. Z. Lechowicz – Foreign Scientific Advisor approved by Ministry of Education of Kazakhstan), 05.07.2022. 2. Grzegorz Wrzesiński: Stability analysis of an embankment with influence of principal stress rotation on shear strength of subsoil. (in Polish) Civil Engineering, Warsaw University of Life Science - SGGW, 2016. 3. Paweł Galas: Determination of undrained shear strength based on seismic dilatometer test SDMT. (in Polish) Civil Engineering, Warsaw University of Life Science - SGGW, 2013. 4. Dariusz Kiziewicz: Evaluation of shear strength of cohesive soils with use of non-standard stress path. (in Polish) Civil Engineering, Warsaw University of Life Science - SGGW, 2012. 5. Dariusz Wojtasik: An analysis of the behaviour of geotextile–soil system in filtration process,

	<p>(in Polish) Environmental Improvement, Warsaw University of Life Science - SGGW, 2004.</p> <p>6. Jakub Batory: Application of probabilistic methods in stability analysis of embankment on organic subsoil. (in Polish) (Environmental Improvement), Warsaw University of Life Science - SGGW, 2004.</p> <p>7. Jacek Bąkowski: Stability analysis of embankment on organic subsoil. (in Polish) Environmental Improvement, Warsaw University of Life Science - SGGW, 2003.</p> <p>8. Artur Osiński: Change in shear strength of cohesive soils due to chemical stabilisation (in Polish) Environmental Improvement, Warsaw University of Life Science - SGGW, 2002.</p> <p>9. Simon Rabarijoely: Use of dilatometer tests to determine the mechanical parameters of organic soils loaded by embankment (in Polish) Environmental Improvement, Warsaw University of Life Science - SGGW, 2000.</p> <p><i>Research Care over doctoral thesis:</i></p> <p>1. Katarzyna Goławska: Creep analysis of Eemian gyttja in complex stress states. (in Polish) Civil Engineering, Warsaw University of Life Science - SGGW</p> <p>2. Beata Gajewska: Analysis of the behavior of the embankment on soft subsoil improved with columns with reinforcement of the transmission layer. (in Polish) Civil Engineering, Warsaw University of Life Science - SGGW</p>
Project/grants achievements (in the last 10 years)	<p>1. BIOPRODUCTS, innovative production technologies of pro-healthy bakery products and pasta with reduced caloric value - POIG.01.03.01-14-041/12. Task 3: Monitoring of selected elements of the environment in grain production with the use of precision farming tools”, co-financed by the European Regional Development Fund under the Innovative Economy Operational Programme. period 2013-2015, (in Polish).</p> <p>2. Geotechnical design of structures according to Eurocode 7 - IT platform. Main researcher, Research project No N N506 218 039, period 2010-2014, (in Polish).</p>
Topic – research problem – for which the candidate supervisor seeks a doctoral student	<p>1. Behavior of organic soils in complex stress states</p> <p>2. Behavior of embankments on soft subsoil improved by columns</p> <p>I am looking for a PhD student with laboratory and field research skills, good knowledge of English, computer programs for numerical analysis and analysis of research results.</p>
<p><u>Contact details:</u></p> <p>Institute</p> <p>E-mail address</p> <p>Tel.</p>	<p>Institute of Civil Engineering / Faculty of Civil and Environmental Engineering</p> <p>zbigniew_lechowicz@sggw.edu.pl</p> <p>+225935200</p>