**Candidate supervisor's information summary form**

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

| Name and surname, degree, title: **Marek Kalenik, Ph.D., D.Sc., Eng., prof. SGGW** | |
|---|---|
| Scientific discipline/ disciplines | 1. Environmental engineering, mining and energy<br>2. Civil engineering, geodesy and transport |
| Professional development (degrees and titles) in chronological order | 2022 - professor SGGW; Institute of Environmental Engineering<br>2018 - habilitated doctor in the field of technical sciences in the discipline of environmental engineering; specialization: hydraulics, water supply and sewage systems; Faculty of Civil and Environmental Engineering; Bialystok University of Technology<br>1999 - doctor of agricultural sciences in the discipline of environmental management; Faculty of Land Reclamation and Environmental Engineering; Warsaw University of Life Sciences<br>1995 - master of science in environmental engineering; Faculty of Land Reclamation and Environmental Engineering; Warsaw University of Life Sciences |
| Most important publications/ patents in the last 3 years (maximum 10) | 1. Barbusiński K., Szeląg B., Białek A., Kalenik M., Bakalár T.: An innovative method of predicting the maximum flow in stormwater sewage systems using soft-sensors. Archives of Environmental Protection 2025, 51(3), 54-73. DOI 10.24425/aep.2025.156009.<br>2. Świętochowski K., Andraka D., Kalenik M., Gwoździej-Mazur J.: The Hourly Peak Coefficient of Single-Family and Multi-Family Buildings in Poland: Support for the Selection ofWater Meters and the Construction of a Water Distribution System Model. Water 2024, 16, 1077 - 1091. https://doi.org/10.3390/w16081077.<br>3. Chmielowski K., Halecki W., Masłoń A., Bąk Ł., Kalenik M., Spychała M., Bedla D., Pytlowany T., Paśmionka I. B., Sikora J., Sionkowski T.: The Efficiency of a Biological Reactor in a Domestic Wastewater Treatment Plant Operating Based on ABS (Acrylonitrile Butadiene Styrene) Material and Recycled PUR (Polyurethane) Foam. Sustainability 2024, 16, 1149 – 1162, https://doi.org/10.3390/su16031149.<br>4. Dąbrowska S., Gałka M., Kubrak E., Kubrak J., Kalenik M., Kiczko A.: Capture of plastic litter by sluice gate and trash racks. Archives of Environmental Protection 2024, 50(3), 18-25. DOI:10.24425/aep.2024.151682.<br>5. Kalenik M., Morawski D.: System for clearing acid-resistant steel Ringa and metod of clearing them. Patent/exclusive right number: Pat. 246162 B1. Application number: P. 442322. Submission date: 20.09.2022. Date of granting the right: 17.09.2024. Patent publication [WUP 50/2024:09.12.2024].<br>6. Świętochowski K., Świętochowska M., Kalenik M., Gwoździej- |

| | |
|---|---|
| | Mazur J.: Analysis of the Use of a Low-Power Photovoltaic System to Power a Water Pumping Station in a Tourist Town. Energies 2023, 16, 7435-7448, https://doi.org/10.3390/en16217435.<br>7. Kalenik M., Chalecki M., Wichowski P., Kiczko A., Chmielowski K., Świętochowska M., Gwoździej-Mazur J.: Real values of local resistance coefficients during water flow through a pipe aerator with filling. Journal of Water and Land Development 2023, 59 (X–XII), 174-182, DOI: 10.24425/jwld.2023.147242.<br>8. Kalenik M., Wichowski P., Chalecki M., Kiczko A.: Efficiency of wastewater purification in medium sand with a lightweight expanded clay aggregate assisting layer. Journal of Water and Land Development 2023, 57 (IV–VI), 30-38, DOI: 10.24425/jwld.2023.145333.<br>9. Chmielowski K., Halecki W., Masłoń A., Bąk Ł., Kalenik M., Spychała M., Niedziółka A., Łaciak M., Roman M., Mazurkiewicz J.: Use of Shredded Recycled Plastic as Filter Bed Packing in a Vertical Flow Filter for Onsite Wastewater Treatment Plants: Preliminary Findings. Sustainability 2023, 15, 1883-1897, https://doi.org/10.3390/su15031883.<br>10. Wichowski P., Kalenik M., Rutkowska G., Malarski M., Czajkowska J., Franus W.: Properties of products obtained in the process of solidification and stabilization of fly ash resulting from thermal treatment of sewage sludge. Cement Lime Concrete 2023, 28(6), 389-408, doi:https://doi.org/10.32047/CWB.2023.28.6.3. |
| Experience in work with doctoral students (defended doctoral dissertations, initiated doctoral procedures) in chronological order | |
| Achievements in the area of projects/grants (in the last 5 years) | Kalenik M., Morawski D.: Pipe aerator with filling. Project in the program "Innovation Incubator 4.0" (Agreement no MNISW/2020/358DIR) implemented as part of a non-competitive project "Support for scientific research management and commercialization of B+R results in scientific units and enterprises" under the Smart Growth Operational Program 2014-2020 (Action 4.4). Completion date: 01.07.2021-28.02.2022. SGGW Warsaw. |
| Subject area of the research project for which the candidate student is being recruited | 1. Investigation of hydraulic working conditions of airlifts used in rapid filters with a self-regenerating bed.<br>2. Investigation of the influence of the addition of sludge from washing the rapid filters on chemical and strength properties of concrete. |
| <u>Contact details:</u><br>Institute<br>E-mail address<br>Tel. | <br>Institute of Environmental Engineering<br>marek_kalenik@sggw.edu.pl<br>(022) 59 35 156 |