

### Topics and scope of doctoral dissertations in the academic year 2025/2026

Lp.	Imię i nazwisko	Tematyka	Zakres	Telefon służbowy	e-mail
1.	Dr hab. inż. Ewa Chodakowska, prof. PB	Management of the competencies of students in technical schools specializing in the electronics and mechatronics industry	Fundamentals of competency management. Analysis of key competencies for modern industry. Competency structure model.	85 746 98 96	e.chodakowska@pb.edu.pl
2.	Dr hab. Katarzyna Czerewacz-Filipowicz, prof. PB	Regional logistics maturity model	Development of a regional logistics maturity model that incorporates key infrastructural, operational, technological, and institutional components influencing the functioning of regional logistics systems. This includes an analysis of existing maturity models, the identification of measurable indicators, and the construction of an original diagnostic tool to be empirically tested in a selected region. The aim is to create a universal logistics maturity assessment model that can support strategic decision-making in the areas of regional development, investment planning, and integration with global supply chains.	85 746 9835	k.czerewacz@pb.edu.pl
3.	Prof. dr hab. inż. Joanna Ejdys	Foresight of Autonomous Vehicles for Sustainable and Smart Urban and Rural Mobility	<ol style="list-style-type: none"> <li>1. Analysis of Current and Potential Applications of Autonomous Solutions for Urban and Rural Mobility</li> <li>2. Analysis and Assessment of Factors Determining the Development of Autonomous Vehicles in Poland</li> <li>3. Analysis of Trends in the Application of Autonomous Vehicles</li> <li>4. Development of a Methodology for Constructing Roadmaps for the Development of Autonomous Vehicles</li> <li>5. Development of Roadmaps for the Application of Autonomous Vehicles for Urban and Rural Mobility</li> </ol> <p>The research methodology includes the use of various research methods, such as survey research, Delphi studies, technology mapping, and the scenario method.</p>	784680522	j.ejdys@pb.edu.pl
4.	Dr hab. inż. Katarzyna Halicka, prof. PB	Concept of development of artificial intelligence in intelligent transport systems (ITS) for sustainable development	The main objective is to propose the author's concept of the development of artificial intelligence in intelligent transportation systems (ITS) focused on supporting sustainable development, taking into account current technological trends, implementation barriers and long-term development trajectories of transportation systems.	517242985	k.halicka@pb.edu.pl

Lp.	Imię i nazwisko	Tematyka	Zakres	Telefon służbowy	e-mail
			<p>Scope of work:</p> <ul style="list-style-type: none"> <li>Analyse the current state of development of artificial intelligence in transportation applications, with a focus on ITS.</li> <li>Identify links between AI technologies and priorities for sustainable development in transportation.</li> <li>Identify key technologies in intelligent transportation systems in a long-term perspective</li> <li>Identify key factors (technological, social, institutional, economic) affecting the development of AI in ITS.</li> <li>Develop long-term directions for the development of artificial intelligence in intelligent transportation systems (until 2050).</li> <li>To assess the potential and limitations of using AI in ITS as a tool to support sustainable transportation policy.</li> </ul> <p>Formulating strategic recommendations for public and private stakeholders (e.g., local governments, ITS designers, policymakers, research institutions).</p>		
5.	Dr hab. inż. Katarzyna Halicka, prof. PB	Determinants and development directions of warehouse logistics automation in distribution centers	<p>The main objective is to identify, analyse and evaluate factors influencing the development of automation of logistics processes in distribution centers in Poland in the long-term perspective.</p> <p>Scope of work:</p> <ul style="list-style-type: none"> <li>Analysis of the current state of automation in distribution centers in Poland and/or Europe.</li> <li>Identification, classification and prioritization of automation technologies.</li> <li>Identification of factors supporting and inhibiting automation.</li> <li>Technology map with assessment of readiness for implementation (TRL - Technology Readiness Level).</li> <li>Development of possible directions and scenarios for the development of automation in distribution centers (2025-2040).</li> </ul> <p>Recommendations for logistics managers and distribution center designers.</p>	517242985	k.halicka@pb.edu.pl

Lp.	Imię i nazwisko	Tematyka	Zakres	Telefon służbowy	e-mail
6.	Dr hab. Zbigniew Korzeb, prof. PB	Impact of ESG ratings on corporate financial management	<ul style="list-style-type: none"> <li>- Systematise and classify concepts such as: ESG, CSR, sustainability, corporate social responsibility and socially responsible investment</li> <li>- Management theories versus sustainability concepts</li> <li>- Environmental, social and managerial factors and a sustainable approach to corporate financial management</li> <li>- Directions of the impact of environmental, social and managerial factors on the financial health of companies</li> <li>- Measuring ESG performance</li> </ul> <p>The impact of ESG ratings on corporate value, profitability and sustainability</p>	85 746 98 20	zbigniew.korzeb@pb.edu.pl
7.	Dr hab. Inż. Dariusz Siemieniako, prof. PB	Power asymmetry and value creation in business relationships using the example of relationships between dominant digital platforms and weaker vendors	The purpose of the dissertation is to establish the relationship between sellers' perceived power asymmetry in relationships with large digital platforms and the creation of value (financial and non-financial) in those relationships.	85 746 98 48	d.siemieniako@pb.edu.pl
8.	Dr hab. Wiesław Urban, prof. PB	Quality management and operational flexibility using Industry 5.0 systems	Integration of Industry 5.0 technologies, including XR, with QM, Lean and Six Sigma methodologies. Real-time asset tracking using IoT and Digital Twins in XR environments. Reduction of operator mistakes through XR-based training systems. Quality improvement based on spatial data and 3D visualization of production parameters. Optimization of internal production logistics routes considering the reduction of energy consumption and other resources. The impact of Industry 5.0 systems on key performance indicators (KPIs) in production management.	+85 746 98 40	w.urban@pb.edu.pl