

**List of promoters for master thesis - students of semester 1
exam in the academic year 2021/2022**

Managing Enterprise of the Future and Logistics systems

No.	Name/surname	Diploma Seminar	Proposed thematic areas and issues
1	Prof. dr hab. inż. Leszek Pacholski	From INDUSTRY 3.0 to INDUSTRY 4.0	Implementation challenges of an economy based on intelligent digital technologies, aspects: technology, organization, management, logistics and ergonomics
2	Prof. dr hab. inż. Stefan Trzcieliński	Business environment, opportunity recognition, Lean and Agile Management and Industry 4.0	<p>Proposal of topics to discuss during the seminar in 2020-21:</p> <ol style="list-style-type: none"> 1. Retrospective of changes in segment of macroenvironment (since beginning of 20th century) <ol style="list-style-type: none"> 1.1. Political and legal 1.2. Economic 1.3. Social and demographical and natural environment 1.4. Technological 2. Comparison of effectiveness of mass, lean and agile production enterprises 3. Measuring agility of enterprise 4. ICT for agile supply chain management 5. Modelling an opportunity 6. ICT for agility in cross-section of: Brightness, Flexibility, Intelligence, Shrewdness Opportunity creation, opportunity discovery (quick response) 7. Agile software manufacturing – tools; variation of effectiveness 8. ICT for Industry 4.0 9. Industry 4.0 and agility 10. Agile project management (in other sectors than ICT) – tools, effectiveness <p>Example of the dissertation' theme:</p> <ul style="list-style-type: none"> • Adjustment of the management system to changes taking place in the socio-demographic, economic and technological segment of the company's environment • Improvement of effectiveness of agile software development teams • IT of Enterprises 4.0 and its ability to quick response
3	dr hab. inż. Agnieszka Stachowiak	Contemporary challenges for production and management	<ol style="list-style-type: none"> 1. Organizational maturity of a selected logistics/production system 2. Resilience of logistics/production systems 3. Contemporary trends and solutions in logistics and management

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4	dr hab. inż. Paulina Golińska-Dawson	Sustainability and Circular Economy in the logistics, supply chain management and production management	<ol style="list-style-type: none"> Analyses of selected logistic processes in the enterprise with regard the possibilities to improve their sustainability Analysis of the sustainability level of the production management in a company and a proposal for improvements Assessment of scenarios the products' recovery in the enterprise and the related logistics system Assessment of selected aspects of logistics / production management in an enterprise from the automotive industry Assessment of material flow management in a selected company in terms of their compliance with Circular Economy Analysis of logistic processes with the regard to the selected aspect of the Circular Econom Assessment of the level of sustainable resource management in a logistics / production company
5	dr Jussi Kantola, prof. PP	Industry 4.0 and beyond, e.g. digitalization, digital operations, management, HR / resources, information systems, smart factory and production, AI, IoT, machine learning	In this research area, individual topics of the MSc thesis will be formulated, taking into account the student's interests. Based on the master thesis, the author and the supervisor will prepare a research article
6	dr hab. rer nat. Gerhard Weber, prof. PP	Operational Research in "Generalized Space-time"	<ol style="list-style-type: none"> OR-MS in data science, statistical learning, machine learning, and artificial intelligence (and applications) OR-MS methods of optimization and optimal control (and applications) OR-MS methods of stochastics and stochastic optimal control (and applications) OR-MS in human resource management and education (and applications) OR-MS in inventory management and supply chain management (and applications) OR-MS in production planning and transportation (and applications) OR-MS in physics and cosmology (and applications) OR-MS in generalized space-time design and research (and applications) OR-MS in generalized space-time shift and travel (and applications) OR-MS in cognitive sciences and neuroscience (and applications) OR-MS in economics, finance and emerging markets (and applications) OR-MS in inverse problems and remote sensing (and applications) OR-MS in brain research and heart research (and applications) OR-MS in earth-, geo- and environmental sciences (and applications) OR-MS in biology and chemistry (and applications) OR-MS in the arts (and applications) OR-MS in development and developing countries, and ethics (and applications)