

Prof. Dr. Jutta Geldermann



Prof. Dr. Jutta Geldermann is professor of Business Administration and Production Management at the University of Duisburg-Essen.

After her diploma degree in Industrial Engineering, obtaining her doctorate and postdoctoral lecturing qualification at the University of Karlsruhe (now KIT - Karlsruhe Institute of Technology), she was chair holder and professor of Production and Logistics at the Georg-August-University of Göttingen from 2007 to 2018. She has successfully acquired and conducted more than 40 research projects funded by industry, German Research Foundation (DFG), Volkswagen Stiftung, the European Union (EU) and various ministries

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Chair of
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Production Management**

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Academia

We teach the application of classical and innovative methods and models for decision support in production management and logistics.

Our lectures, seminars, practical lectures and excursions are primarily aimed at students of industrial engineering. Bachelor's and Master's theses are supervised for ongoing research projects or in cooperation with companies.

The range of courses offered by the Chair of ABWL and Production Management comprises:

Bachelor's:

- Introduction to Business Administration for Industrial Engineers
- Operations Research for Industrial Engineers
- Production Management
- Bachelor seminar Production Management

Master's:

- Supply Chain Management (POM 1)
- Plant Management in Industry and in the Energy Sector (POM 2)
- Methods of Production and Operations Managements (POM 3)
- Seminar for Production and Operations Management (POM 4)

Supervision of Bachelor's and Master's theses

Research

Our research projects focus on planning and decision-making models for improving resource and energy efficiency in individual production systems and in supply chain management. We use methods of operations research, especially multi-criteria decision support, for the techno-economic optimization of production systems, also taking sustainability into account. In the context of Industry 4.0 many current research questions emerge. We are interdisciplinary and cooperate with national and international partners from science and industry.

Selected research projects

SALAM 2 – Transboundary strategies for an Integrated Water Resource Management (IWRM) to address the water deficit problem in the middle east

Due to the nearly exhausted freshwater resources in Palestine and Jordan, a coordinated interaction of technical facilities and management concepts for the extraction, distribution, intermediate storage and reuse of water shall compensate sustainably and cost-efficiently for the deficits.

The goal is to techno-economically evaluate the multitude of technical alternatives. The multi-objective decision support, takes a variety of aspects such as energy efficiency, economic viability or the impact on wastewater management and groundwater protection into consideration.

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OER-Content.nrw - Development of a digital teaching offer "Operations Research for Sustainability: Energy, Mobility, Industry"

In cooperation with the Ruhr University Bochum and the RWTH Aachen, this project was launched with the aim of developing, implementing and disseminating a digital, model- and application-oriented teaching /learning system. Current problems and methods from our research projects are used as basis for the design of sustainable energy and mobility systems as well as industrial value chains in order to make them available on the state learning portal ORCA.nrw.

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HKM - Study on the preparation of a corporate carbon footprint for Hüttenwerke Krupp Mannesmann GmbH

The aim of this study together with HKM is to balance all greenhouse gas emissions associated with the production of one ton of steel at HKM. To this end, the method for drawing up a product-related life cycle assessment in accordance with ISO 14067 is used. Following the successful certification of the base year, a detailed assessment of various emission reduction scenarios was carried out. In particular, the necessary assumptions and uncertainties of the scenarios were presented transparently, and the emission reduction potentials were quantitatively determined.

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