Prof. Dr. Jutta Geldermann

Prof. Dr. Jutta Geldermann is Full Professor and Chair Holder of Business Administration and Production Management at the University of Duisburg-Essen, Faculty of Engineering.

After her diploma degree in industrial engineering and management, obtaining her doctorate and postdoctoral lecturing qualification at the University of Karlsruhe (now KIT - Karlsruhe Institute of Technology), she was Full Professor and Chair Holder of Production and Logistics at the Georg-August-University of Göttingen from 2006 to 2018.

From 2009 to 2018, she served as a board member of the Energy Research Center of Lower Saxony (efzn). She was the chairperson of the German Academic Association for Business Research (VHB) from 2023 to 2024.

She has conceived and conducted over 50 research projects aimed at improving resource and energy efficiency, funded by industry, the German Research Foundation (DFG), the Volkswagen Foundation, the European Union (EU), and various ministries.

Currently, she is President of the German Association of Operations Research (GOR)

Chair of Business Administration and Production Management

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UNIVERSITÄT DUISBURG ESSEN

Open-Minded

Chair of
Business Administration and
Production Management

Chair of Business Administration and Production Management

Teaching

Our lectures, seminars, practical talks, and excursions are primarily for students of industrial engineering and management, but also open to students of engineering sciences in general. Bachelor's and Master's theses are supervised as part of our ongoing research projects or in cooperation with industry partners.

Our students learn methods for decision-making in production management. Operations Research (OR) techniques include mathematical models, algorithms, and data analysis, and are applied to case studies from various industrial sectors.

Bachelor:

- Operations Research for Industrial Engineering and Management
- Sustainable Production Management
- Bachelor Seminar

Master:

- Supply Chain Management (POM 1)
- Plant and Equipment Planning (POM 2)
- Master Seminar

Academic Services

From 2025 to 2026, Prof. Dr. Geldermann serves as the honorary chairperson of the **German Society for Operations Research** (**GOR** e.V.)
and is supported by Jonas Wesseling as the board assistant.
Contact: vorstand_assistent@gor-ev.de

Research

Our research projects focus on planning and decision-making models to improve resource and energy efficiency in individual companies and across supply chains. We use Operations Research methods - especially multi-criteria decision support - and life cycle assessment (LCA) to evaluate sustainability.

Selected research projects

EMSARZEM - Usage of Waste Incineration Slag as a Raw Material for Cement Production

The EMSARZEM project explores how fine fractions of waste incineration slag can be processed to recover metals and minerals as valuable secondary raw materials. This helps the cement industry conserve natural resources, lower CO_2 emissions, and promote a circular economy.
Our team developed a freely available tool to assess the ecological and economic impacts of these new processing technologies based on life cycle analysis.

Report and Modell: udue.de/EMSARZEM

HKM – Life Cycle Assessment for Hüttenwerke Krupp Mannesmann

All relevant emissions associated with the production of one ton of steel are recorded and assessed in a life cycle assessment according to ISO 14040 and 14067.

Contact: jonas.wesseling@uni-due.de

Analysis and Optimization of Emergency Service Infrastructure

Fast emergency response saves lives — and depends on where ambulances are stationed and how they're distributed. In Duisburg, demographic, geographic, and economic factors make planning these locations especially challenging. This project supports Duisburg's emergency medical services by developing mathematical optimization methods to improve ambulance placement and ensure quick help when it's needed most.

Contact: isabel.wiemer@uni-due.de

COFFEE Story - Innovations for sustainability in the circular economy

Together with partners from Indonesia, Malaysia and Turkey, the team explores ways to strengthen circular economy practices in the coffee sector. The focus is on utilizing by-products and building sustainable supply chains.

We use techno-economic analyses and life cycle assessments to create strategies that reduce greenhouse gas emissions and strengthen the social inclusion of smallholder farmers.

Contact: jonas.wesseling@uni-due.de

SALAM 2 - Integrated Water Resources Management in the Middle East

In Jordan and Palestine, freshwater resources are almost depleted. The project partners therefore developed concepts for water generation, distribution, storage, and reuse. We assessed different technical solutions for their energy efficiency, cost-effectiveness, and effects on wastewater and groundwater protection.