

Masterseminar Management Science/Operations Research

A literature seminar on the subject of warehousing



A literature seminar on the subject of warehousing

Topic: Buffering the material flow along the supply chain in warehouses is a crucial step in order to accommodate variability caused by factors such as product seasonality and/or batching in production and transportation. By doing so, different planning problems such as storage assignment, order picking and consolidation, packing, and shipping arise within the warehouse. Especially the fast growth of the e-commerce business characterized by a vast number of small orders and high time pressure increases the strategic role of warehousing and creates a need for optimization of the different subtasks. The goal of this seminar is to review state-of-the-art literature tackling warehousing problems and analyze models as well as solution procedures from an Operations Research perspective. As a first step, each seminar group will be assigned a research paper from the field of warehousing, which they are asked to thoroughly read and comprehend. Subsequently, the groups are required to conduct a literature review on related topics. The assigned research paper and the results of the literature review will be presented in a seminar presentation as well as a seminar paper.

Attention: Basic knowledge in Operations Research is required! It is recommended that only students who have successfully completed a basic module Operations Research and/or the master module Warehousing & Delivery Logistics apply for the seminar. For students without basic knowledge in Operations Research, some fundamentals in mathematical modeling will be provided via a video tutorial.

A literature seminar on the subject of warehousing

Supervision: Prof. Dr. Felix Weidinger and the team of the chair

Grading: 50/50 based on presentation (20 Min) and seminar paper (approx. 20-25 pages); if you are between two grades, the effort during the discussion will impact the final mark.

Modus:

- Groups of 4 students each
- Seminar presentation will be held in front of all participants. Pros and Cons of the presented work will be discussed (so-called friendly review)
- Seminar paper must be submitted by the end of the semester. Input from the presentation must be addressed and discussed.

Language: English (for both, the presentation as well as the paper)

A literature seminar on the subject of warehousing

Timeline:

- April 17, 2024: Kick-off presentation by the chair (presumably 15:20 to 17:00)
introduction to topic and formalities, forming of groups
- CW 17 2024 – CW 39 2024:
work on your seminar topic in groups, regular meetings with your supervisor
- July 10 and July 11, 2024: Seminar presentations
block seminar
- September 30, 2024: Deadline for seminar paper submission

Contact: Constantin Wildt, constantin.wildt@tu-darmstadt.de