Lehrstuhl für BWL insb. Logistikmanagement
Johannes Gutenberg-Universität Mainz
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Seminar in Logistikmanagement
(WiSe 2025/26)
M.Sc. Carolin Hasse
M.Sc. André Hessenius
M.Sc. Christian Manz
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Themen Seminar Logistikmanagement

- **Operations Research/Management Science**:

Thema 1 (*Bin packing and cutting stock problems: Mathematical models and exact algorithms*)
Delorme *et al.* (2016)

Thema 2 (*The Fixed Charge Transportation Problem: An Exact Algorithm Based on a New Integer Programming Formulation*)
Roberti *et al.* (2015)

Thema 3 (*The Three-Dimensional Bin Packing Problem*)
Martello *et al.* (2000)

Thema 4 (*The 0-1 Knapsack Problem*)
Pisinger and Toth (1998)

Thema 5 (*A branch and bound algorithm for cutting and packing irregularly shaped pieces*)
Alvarez-Valdes *et al.* (2013)

Thema 6 (*Maximum-weight stable sets and safe lower bounds for graph coloring*)
Held *et al.* (2012)

Thema 7 (*A Branch-and-Repair Method for Three-Dimensional Bin Selection and Packing in E-Commerce*)
Fontaine and Minner (2023)

Thema 8 (*Scattered storage assignment: mathematical model and valid inequalities to optimize the intra-order item distances*)
Albán *et al.* (2023)

Thema 9 (*Variable Neighborhood Search for the Set Orienteering Problem and its application to other Orienteering Problem variants*)
Pênička *et al.* (2019)

Thema 10 (*Timetable synchronization of the last several trains at night in an urban rail transit network*)
Zhang *et al.* (2024)

Thema 11 (*Solving matching problems with linear programming*)
Grötschel and Holland (1985)

- **Transportation**:

  Thema 12 (*An adaptive large neighborhood search approach for multiple traveling repairman problem with profits*)
  Avci and Avci (2019)

  Thema 13 (*A Branch-and-Price-and-Cut Algorithm for the Vehicle Routing Problem with Two-Dimensional Loading Constraints*)
  Zhang *et al.* (2022)

  Thema 14 (*A Compact Arc-Based ILP Formulation for the Pickup and Delivery Problem with Divisible Pickups and Deliveries*)
  Jargalsaikhan *et al.* (2021)

  Thema 15 (*A Branch and Price Algorithm for the Heterogeneous Fleet Multi-Depot Multi-Trip Vehicle Routing Problem with Time Windows*)
  Şahin and Yaman (2022)

  Thema 16 (*An exact algorithm for the vehicle routing problem based on the set partitioning formulation with additional cuts*)
  Baldacci *et al.* (2008)

  Thema 17 (*A Branch-and-Cut Algorithm for the Symmetric Generalized Traveling Salesman Problem*)
  Fischetti *et al.* (1997)

  Thema 18 (*A New Exact Algorithm for Single-Commodity Vehicle Routing with Split Pickups and Deliveries*)
  Li *et al.* (2023)

  Thema 19 (*Branch-Cut-and-Price for the Time-Dependent Green Vehicle Routing Problem with Time Windows*)
  Liu *et al.* (2023)

  Thema 20 (*An exact Price-Cut-and-Enumerate Method for the Capacitated Multitrip Vehicle Routing Problem with Time Windows*)
  Yang (2023)

  Thema 21 (*A Branch-Cut-and-Price Approach for the Single-Trip and Multi-Trip Two-Echelon Vehicle Routing Problem with Time Windows*)
  Marques *et al.* (2022)

  Thema 22 (*Nested column generation for split pickup vehicle routing problem with time windows and time-dependent demand*)
  Wu *et al.* (2024)

  Thema 23 (*Iterated Inside Out: A New Exact Algorithm for the Transportation Problem*)
  Bargetto *et al.* (2025)

- **Location Planning**:

  Thema 24 (*Median and Covering Location Problems with Interconnected Facilities*)
  Cherkesly *et al.* (2019)

  Thema 25 (*Revisiting the Hamiltonian p-median problem: A new formulation on directed graphs and a branch-and-cut algorithm*)
  Bektaş *et al.* (2019)

  Thema 26 (*Compact MILP formulations for the p-center problem*)
  Ales and Sourour (2018)

  Thema 27 (*Benders decomposition for the discrete ordered median problem*)
  Ljubić *et al.* (2024)

Literatur

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