

Research on Stochastic Modeling and Optimization

Syllabus

Course Description:

In the PhD course *Research on Stochastic Modeling and Optimization*, latest research topics and challenges will be presented and discussed and venues for innovative research followed. The course focuses on stochastic modeling and optimization methods for decision support and covers recent research contributions in several fields of logistics and operations. Knowledge of the Master-level course *Stochastic Modeling and Optimization* at the chair of Logistics and Supply Chain Management is a pre-requisite for this advanced research seminar.

Methods:

Based on state-of-the-art research articles, PhD students should present and apply methods for decision making under uncertainty. The objective is to give both, an overview of research fields, typical research methodology, and to inspire own work in the field.

Main textbooks:

- Tijms, H.C. (2003). *A First Course in Stochastic Models*. Wiley.
- King, A.J., Wallace, S.W. (2012). *Modeling with Stochastic Programming*. Springer.
- Powell, W. (2011). *Approximate Dynamic Programming*. Wiley.
- Kleijnen, J.P.C. (2008). *Design and Analysis of Simulation Experiments*. Springer.