

RESEARCH SEMINAR

The Institute of Production and Logistics Management of Johannes Kepler University
invites you to the following talk:

Decision Space Robust Representations for Discrete Multi-Objective Optimization Problems

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Wednesday April 6, 2022, 9:30 a.m.
JKU Lecture Hall Wing
Lecture Hall 4

Abstract:

We introduce robustness measures in the context of discrete multi-objective programming problems. The proposed measures are in line with the concept of decision robustness, which considers the uncertainty with respect to the implementation of a specific solution. An efficient solution is considered to be decision robust if many solutions in its neighborhood are efficient as well. This rather new area of research differs from robustness concepts dealing with imperfect knowledge of data parameters. Our approach implies a two-phase procedure, where in the first phase the set of all efficient solutions is computed, and in the second phase the neighborhood of each one of the solutions is determined. The indicators we propose are based on the knowledge of these neighborhoods. We extend these robustness measures to subsets of efficient solutions such that the robustness of the representation can be considered as a representation quality measure like coverage, uniformity or eps-indicator.

Host: Prof. Sophie Parragh