OPTIMIZATION MODELS FOR COLLABORATIVE LOGISTICS

Gianpaolo Ghiani¹, Emanuele Manni¹, and Chefi Triki²

¹Department of Innovation Engineering
University of Lecce
Via Monteroni
73100, Lecce, Italy

²Department of Mathematics
University of Lecce
Via Arnesano
73100, Lecce, Italy
Speaker: chefi.triki@unile.it

Abstract: The Lane Covering Problem with Time Windows arises in the context of collaborative logistics. Given a set of lanes, it aims at finding a set of tours covering all lanes with the objective of minimizing the total travel cost. The purpose of this paper is to formulate a model for such a problem and to propose a heuristic approach based on Lagrangian relaxation for its solution. The behaviour of this procedure is tested on a set of random instances.

Keywords: lane covering; collaborative logistics; Lagrangian relaxation; transportation.