
The VeRoLog Solver Challenge 2019

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Abstract

The fourth edition of the VeRoLog Solver Challenge, organized by ORTEC, revolves around a challenging vehicle routing problem that is faced by ORTEC customers in practice, but has received little attention in the literature so far.

The problem of the challenge is the coordination of delivery and subsequent installation of equipment, such as vending machines. The goal is to satisfy all machine requests from customers within the given planning horizon, while minimizing the total cost. The machines (of different kinds) must be delivered to the customers from a central depot location within a customer-specific delivery window. After delivery, each machine must be installed by a technician. For every full day a machine is ‘idle’, i.e., delivered at the customer but not yet installed, a fixed penalty is charged. Each technician has a skill set that determines which kinds of machines he or she can install. Technicians, who are based at different locations, must adhere to a simple labor rule that limits the maximum number of consecutive days they can work. A comprehensive description of the problem is available on the challenge website <https://verolog2019.ortec.com/>.

The purpose of this talk is to give a detailed explanation of the problem, and share some interesting facts and figures about this year’s VeRoLog Solver Challenge. The remainder of this special session is devoted to presentations by selected challenge finalists, who will report on their solution approach. The winners of the challenge will be announced during the conference dinner on June 4, 2019.

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