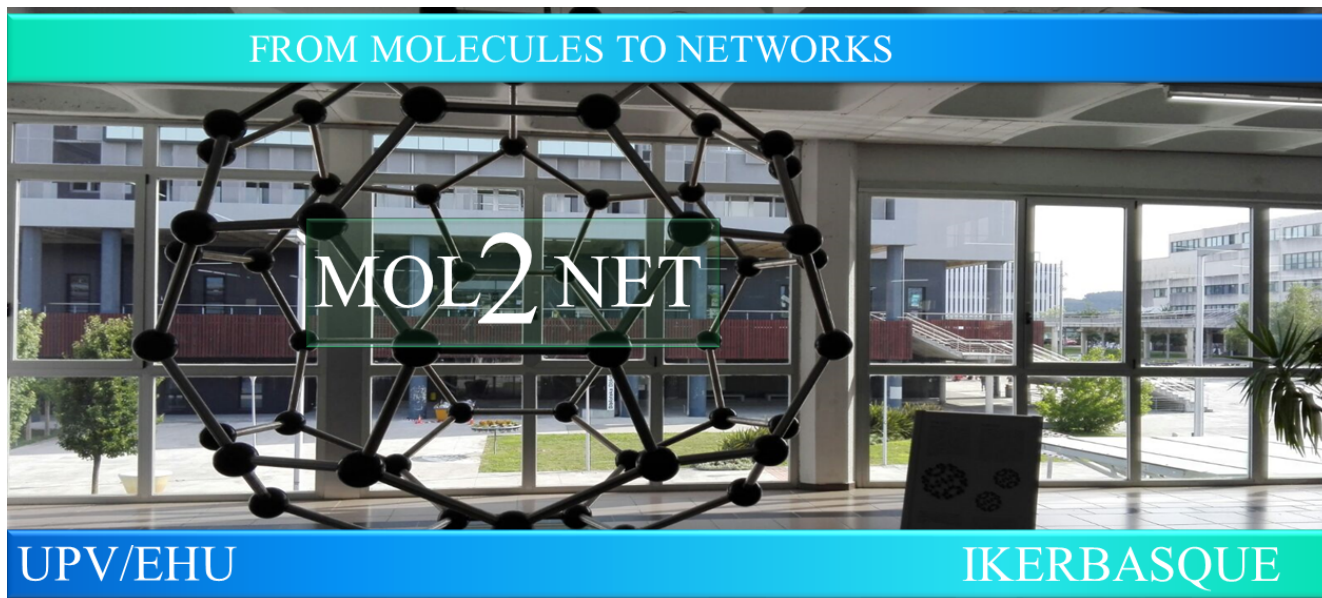




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Two models for a service planning problem

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Graphical Abstract

Abstract

The service planning problem is motivated by a situation faced by a telecommunications company where the following problem arises: how to select a subset of service orders to be performed by a set of available crews as well as determine the sequences in which they must be carried out such that the wage between the crews is balanced, taking into account restrictions on compatibility service-crew and working hours.

After a detailed literature review, we conclude that the problem can be modeled as a mixed-

	<p>integer linear programming (MILP) model and as a constraint programming (CP) model. The formulations are coded in C++ and solved through the CPLEX optimizer. In this work, we analyzed results over a set of 73 instances adapted from the literature. In general, the CP has a good performance. It finds 95% of feasible solutions and 50% of the know optimums. Besides, improves the MILP results in 37.84% of the total instances with an average improvement of 12.26%.</p>
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Introduction (*optional*)

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Materials and Methods (*optional*)

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Results and Discussion (*optional*)

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Conclusions (*optional*)

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References (*mandatory*)

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