## An Integer Linear Programming approach to the Time-constrained Vehicle Routing Problem with Time-windows

Maria Teresa Godinho<br/>\*^1 and Maria João Lopes^{\dagger 2}

<sup>1</sup>Polytechnic Institute of Beja e CmafCio – Portugal <sup>2</sup>Iscte-IUL, University Institute of Lisbon CmafCio – Portugal

## Abstract

We study a problem arising in home healthcare nursing. Organizing home visits to patients involves features of various OR problems, namely scheduling, rostering and routing. In this work, we address the routing problem, modeled as a Time-constrained Vehicle Routing Problem with Time Windows (TCVRPTW). An integer linear programming formulation of the TCVRPTW is introduced. Preliminary computational results will be presented at the talk.

 $<sup>^{*}</sup> Corresponding \ author: \ mtgodinho@ipbeja.pt$ 

<sup>&</sup>lt;sup>†</sup>Speaker