



## **SÉMINAIRE LASQUO - LISA**

**Vendredi 3 mai 2013 à 10h00**

**Salle B314 à l'IMA**

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### **ON THE MULTIOBJECTIVE TRUCK AND TRAILER ROUTING PROBLEM**

The truck and trailer routing problem (TTRP) is an extension of the well-known vehicle routing problem where the capacity of the vehicles is increased with the use of detachable trailers. The use of trailers imposes accessibility restrictions at some customers giving rise to complex routes where trailers are detached and parked en-route before serving those customers. Practical applications of the TTRP can be encountered in milk collection and mail delivery.

Multiobjective variants of state-of-the-art methods for the TTRP were implemented: a matheuristic based on a set-partitioning formulation of the problem and a GRASP/VND with path relinking. Preliminary results on classical instances from the literature highlight the trade-off between the size and composition of the fleet and the cost of the solutions. The results suggest that trying to use the smaller number of trucks or trailer could increase considerably the total distance of the solutions.