



# Joint Seminar CIRRELT, MobilOpt and Canada research chair in integrated logistics

**Albert Schrottenboer**

School of Engineering,  
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Faculty of Business Administration  
MobilOpt: Mobility Optimization



Canada research chair  
in integrated logistics

## DATA-DRIVEN STOCHASTIC INVENTORY ROUTING

**Abstract:** Stochastic inventory routing revolves around combining optimal inventory replenishment and transportation decisions for geographically scattered customers that face stochastic demand. This canonical optimization problem in operations management has many theoretical challenges resulting from various emerging applications. In this talk, we discuss several (ongoing) research projects in this domain. We start by discussing the issue of consistency of replenishment schedules – which is observed throughout practice. We shortly discuss how branch-and-price can help to solve such an approach. Afterward, we study an extension of this model in the distribution of green hydrogen. Here, we integrate MDP and MIP techniques to optimize a tactical planning problem while taking operational level uncertainty into account. Finally, we sketch new approaches for fully dynamic and stochastic approaches in case we cannot rely on distributional assumptions for customer demand.

**About the speaker:** Albert Schrottenboer is an Assistant Professor of Transport and Logistics at the Operations, Planning, Accounting and Control Group, School of Engineering, of the Eindhoven University of Technology, the Netherlands. He obtained a BSc, MSc, and PhD in Operations Research at the University of Groningen, the Netherlands. His research focusses on practically inspired optimization problems in the area of transportation and logistics, either originating from new developments in the transition towards renewable energy (offshore wind farms, hydrogen), or originating from new concepts in city logistics, warehousing, maintenance, and inventory control. Albert is particularly interested in the development of new methodology required to solving such optimization problems. He has been a visiting research scholar at Georgia Institute of Technology and Loyola University Chicago. His research is internationally recognized and led to publications in, among others, Operations Research, Transportation Science, and Transportation Research Part C: Emerging Technologies.

**JEUDI / THURSDAY**

**2 novembre / November 2nd**

**10h00**

**Pavillon Palasis-Prince**

**Local / Room**

**2327**

**Ouvert à tous  
Open to all**

**Café et viennoiseries**

**Responsables / Organizers**

**Maryam Darvish  
Leandro Coelho  
Jacques Renaud**