Séminaire conjoint CIRRELT, MobilOpt et la Chaire de recherche du Canada en logistique intégrée

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MobilOpt: Mobility Optimization

THE MARITIME SEARCH AND RESCUE ROUTING PROBLEM

Abstract: In a maritime incident, the response time of the rescue teams can make the difference between life and death for individuals at sea. Due to weather conditions, the positions of the individuals at sea change over time and the search and rescue (SAR) paths should be adjusted accordingly. Weather forecasts provide valuable information about wind, currents and tides and using these forecasts, one can estimate the probability of finding an individual at a specific point and time after an incident. Given these probability maps, the goal is to design search paths for vessels and drones such that to maximize the probability of finding individuals at sea. The presentation will introduce new mixed integer and constraint programming models that capture the operational realities of the SAR routing problem, and it will show computational results on new benchmark instances inspired by real-world scenarios. Lastly, the presentation will conclude with some managerial insights and avenues for future research.

Short biography: Dimitris is an Associate Professor in Operations and Supply Chain Management at Bayes Business School (formerly Cass), City St George's, University of London. He previously held positions as Assistant Professor at the University of Bath and Research Fellow at the University of Southampton on an EPSRC-funded railway optimization project. He holds a degree in Chemical Engineering from the National Technical University of Athens, an MBA, and a PhD in Operational Research from the Athens University of Economics and Business. Dimitris' research focuses on the design and application of mathematical models, heuristics, and matheuristics for complex combinatorial optimization problems, including project and production scheduling, vehicle routing, network design, location and districting. His work has been published in leading journals such as Production and Operations Management, European Journal of Operational Research, and Transportation Research Part E. Dimitris has also contributed to numerous research projects on optimization-based decision support systems for operations and logistics.

Zoom: https://ulaval.zoom.us/j/63256125712?pwd=Eom2JZ0Mw19vUQfMJb1BoTgemFtCth.1
Meeting ID: 632 5612 5712 – **Passcode:** 434476

JEUDI / THURSDAY
20 NOVEMBRE / NOVEMBER 20TH
10h00

Université Laval
Pavillon Palasis-Prince
Salle / Room 2327

Ouvert à tous / Open to all
Café et viennoiseries

Responsable / Organizer:
Leandro Coelho

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