

Colloque du
Département d'Informatique et de Recherche Opérationnelle

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Probabilistic route choice modeling without path alternatives

Modélisation probabiliste de choix d'itinéraire sans des ensembles de choix de chemins

Abstract:

Probabilistic route choice models play a central role in many transport applications, for example, traffic simulation and infrastructure planning. In this talk we first give an introduction to the topic and followed by a presentation of the recently developed infinite logit model in which the choice of route is formulated as a sequence of links choices following a dynamic discrete choice model. We show that the model can be consistently estimated based on real path observations and used to forecast route choices without requiring choice sets of paths. We also briefly discuss the potential advantages of this approach over path based ones in the context of traffic simulation. This is joint work with Mogens Fosgerau (Technical University of Denmark) and Anders Karlström (Royal Institute of Technology, Stockholm).

Biosketch:

Emma Frejinger is assistant professor in transport modeling at the KTH Royal Institute of Technology, Stockholm, and holds a PhD in mathematical sciences from the Swiss Federal Institute of Technology, Lausanne. Her research focuses on demand modeling in general and probabilistic route choice modeling in particular. The latter was also the topic of her doctoral thesis for which she received awards from the Transportation Science and Logistics Society (INFORMS) and the International Association for Travel Behavior Research (IATBR).



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Information : Pierre L'Ecuyer, <http://www.iro.umontreal.ca/~lecuyer/>