

Date, heure :	Lundi 16 mars, 10h00 à 11h30
Conférencier invité :	Gabriel Moises Fuentes
Titre / université :	Assistant professor, Business and Management Science Department, NHH, Norway
Titre / présentation :	<i>Hedging ENSO climate-induced payload risk in tramp shipping: The case of the Parana River</i>
<p>Résumé : Tramp shipping operations are increasingly exposed to climate-driven disruptions that affect both vessel deployment decisions and cargo availability. This study formulates a vessel deployment problem for agricultural exports along the Paraná River, where hydrological variability imposes draft constraints that limit cargo payloads. We integrate large-scale climate information into operational decision-making by exploiting teleconnections between the El Niño–Southern Oscillation (ENSO), river depth conditions in the Paraná basin, and temperature patterns at multiple locations in the United States. The central premise is that ENSO simultaneously influences climate conditions across geographically distant regions. Using ENSO hidden-state representations, we capture the seasonal and lead-dependent levels of the Paraná basin to low-water events and link it to the HDD-based weather derivative indices in a stochastic programming model with uncertain payload capacity. The model jointly determines vessel deployment, expected payload, and hedging positions. An experiment combining observed Paraná low-water payload shortfalls with HDD derivative payoffs shows substantial reductions in profit volatility, while average profits remain largely unaffected.</p>	
Séminaire en présentiel (ouvert à tous)	
Salle :	BMO (CSC - 1 ^{er} étage, section verte)
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