



# Soutenance de thèse de doctorat de

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«*Sustainable Supply Chain Design Integrating Logistics Outsourcing In the Context of Uncertainties*»

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This thesis is at the intersection of three research areas: Supply Chain Design; Supply Chain Integration; And Supply Chain Risk Management. It highlights the concepts of Resilience & Sustainability to better understand the challenges of designing Sustainable Supply Chains, their planning, evolution and exploitation. We propose two complementary approaches to construct a sustainable supply chain integrating logistics outsourcing as an efficient flexible strategy; The normative and the prescriptive approaches. The first approach consists of a two-stage stochastic modelling approach to optimize the level of Third-Party Logistics providers' integration, and the Carbon Reduction Investment within a climate change resilient Supply Chain, and during a multi period horizon. The second approach consists of an integrated methodology; DEA/QFD- Fuzzy AHP/Taguchi Robust Design for selecting the most efficient Third-Party Logistics in the context of sustainable & resilient supply chains.

MARDI

28 février 2017  
13 h 30

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Pavillon Palasis-Prince  
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