Research Grants for PhD students from the China Scholarship Council

Information Form (please read the guidelines carefully on the website www-csc.utt.fr)

Supervisor's name : Chen | Given names : Haoxun

Status (prof., assistant prof., …) : Professor

Laboratory :	Computer Science and Digital Society (LIST3N)	Website address : https://recherche.utt.fr/list3n
Institution :	University of Technology of Troyes	Website address : https://www.utt.fr/

Scientific competence of the supervisor:

Logistics and Supply Chain Management, Inventory Mangement, Collaborative Logistics, Operations Research

Two major publications in the field proposed for the PhD :

1. R. Aldrighetti, D. Battini, D. Ivanov, and I. Zennaro, Costs of resilience and disruptions in supply chain network design models: A review and future research directions, Int. J. of Production Economics, 235 (2021) 108103.
2. L. V. Snyder, Z. Atan, P. Peng, Y. Rong, A. J. Schmitt, and B. Sinsoysal, OR/MS models for supply chain disruptions: a review, IIE Transactions, 48 (2016) 89–109.

Website address of the personal page : https://recherche.utt.fr/research-directory/haoxun-chen

Supervisor's email : haoxun.chen@utt.fr

Description of the research work proposed for a PhD ***Topic # (see list) :*** VII-30

Title : Integrated Supply Chain Design and Strategic Inventory Ddeployment under Supply Disruptions

Subject :

The 2020-2023 global chip shortage, exacerbated by the COVID-19 pandemic, geo-political uncertainty, and other factors, has affected more than 169 industries as a consequence of chip supply disruptions. This makes supply chain risk management and resilience become a prominent issue, attracting more and more attention of researchers and industrial practitioners. A supply chain disruption is an unplanned and unanticipated event that disrupts the normal flow of goods and materials in a supply chain. A resilient supply chain is able to anticipate, prepare for, respond to, and recover from disruptions while maintaining operations at desired levels of efficiency and effectiveness. Focusing on manufacturing supply chains, this doctoral research project tries to address supply disruptions at the strategic and tactical levels by considering supply disruptions in supply chain design and inventory deployment. Its objective is to develop integrated modeling and solution approaches for optimizing the location of manufacturing plants and distribution centers/warehouses and the inventory deployment at these facilities with the consideration of supply disruption risks, costs of resilience, strategies for mitigating and recovering from disruptions, and operational efficiency.

Keywords :

Supply Chain Management, Supply Disruptions, Supply Chain Resilience, Supply Chain Design, Inventory Deployment

Expected collaborations :

Background required from the applicant :

Operations Research, Probability Theory, Computer Programming

Existence of a PDF file detailing the proposal ("yes" or "no") : yes

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