

Laboratoire : Analyse et Modélisation de Systèmes
pour l'Aide à la Décision

Directeur : Achchab boujema

Code Sujet	Intitulé du sujet de thèse	Nom du directeur de thèse	Prénom du directeur de thèse	Etablissement d'attache du directeur de thèse	Laboratoire	Résumé du sujet de thèse proposé
LAMSAD-01	Modeling and Analysis SMEs Credit Risk Management with Data Science	Okar	Chafik	EST	LAMSAD	<p>Small and medium-sized enterprises (SMEs) are a main interest for policy-makers and have always been a substantial actor in the development of any economy. Supply chain finance (SCF) plays a significant role in SMEs due to global credit crisis. Forecasting SME credit risk is important for securing SCF in comfortable operation. Integrate different statistical modeling and machine learning methods to predict SMEs credit risk in supply chain finance are among the hot research topics in this area nowadays. This Thesis aims to:</p> <ol style="list-style-type: none"> 1-Survey and examine data science and predictive analytics in financial supply chain and credit risk management for SMEs (Morocco case study). 2- Endeavour of delivering better access to financial services by: <ul style="list-style-type: none"> - Using text mining, machine learning and statistical approaches to model various data such as structured and unstructured data, text evaluations, financial statements, etc. - Create and improve predictive models that strength those data using deep learning. 3- Investigate the potential regulatory and economic impact using data science.
LAMSAD-02	Performance Evaluation of Supply Chain Networks using Cooperative and Non-cooperative Game	Okar	Chafik	EST	LAMSAD	<p>An ideal supply chain management (SCM) network model captures strategic interactions among decision makers subject to dynamic and stochastic information sharing, capacity, demand, production and policy across all tiers of the network. Early applications of game theory in supply chain include constructing game-theoretic frameworks of the buyer-supplier relationship, and minimizing the bullwhip effect. Game theory has become an important tool in the analysis of SCM networks with individuals, multiple agents or groups of people whose goals are opposed conflicting. This thesis aims to:</p> <ol style="list-style-type: none"> 1- Propose and evaluate stochastic models, game theory approach and solution algorithms for solving SCM network design problems of a realistic scale. 2- Discuss and analyze both cooperative and non-cooperative game approaches in static and dynamic settings.

LAMSAD-03	Adapting BIG DATA technologies to Moroccan SMEs	Okar	Chafik	EST	LAMSAD	<p>Big data and the use of big data analytics is being adopted more frequently, especially in large organisations that have the resources to deploy it. Big data analytics is allowing businesses to optimise operations and gain deeper insights into their customers needs and behaviours. In the other side the Small and medium-sized enterprises are the backbone of the global economy. They are essential economic players in the economies of nations and an important source of job creation, competition, economic dynamism and innovation and represent the seeds of future large corporations and companies. A small change in SMEs can have larger macro level effect due to their overall position in the economy and also they have the advantage and flexibility for quicker adaptation to changes towards efficiency.</p> <p>The use of big data analytics are igniting opportunities for SMEs to find new ways to harness the power of the growing aggregation of digital data, to extend their products and services as well as to create new ones, to deliver a more personalized service to their customers and to increase flexibility, productivity, responsiveness, anticipation and ability to meet customer need through capturing blind spots and making better decisions.</p> <p>The four main goals of this project are:</p> <ol style="list-style-type: none"> 1. Understanding the opportunities of implementing BIG DATA technologies to SMEs 2. Benchmarking the use of BIG DATA technologies to international SMEs; 3. Understanding the critical factor successes of implementing BIG DATA technologies to international SMEs 4. Developing specific BIG DATA tools for Moroccan SMEs
LAMSAD-04	Apport de l'Intelligence territoriale pour une bonne gouvernance. Cas de la région Casablanca-Settat	Achchab	Boujemâa	EST	LAMSAD	<p>L'émergence de la nouvelle économie et de la société de l'information a montré l'importance de plus en plus grandissante que prennent l'information et la connaissance parmi les ressources stratégique du territoire. La régionalisation avancée au Maroc a donné plus d'autonomie aux régions pour mener à bien une stratégie décentralisée et déconcentrée à multi-acteurs.</p> <p>C'est dans ce contexte que s'inscrit cette recherche, et qui vise avant tout de mettre l'accent sur les apports que peuvent apporter les éléments de l'intelligence économique, de la veille stratégique, de la gestion des connaissances ou encore de l'intelligence territoriale pour produire une intelligence collective au service d'une bonne gouvernance du territoire, et pour son développement. Une attention particulière sera accordée aux systèmes de collecte, et de traitement de l'information pour en faire une connaissance exploitable par les décideurs.</p> <p>Nous nous placerons pour la partie empirique dans le cas de la région Casablanca-Settat, en mettant en évidence le rôle des différents acteurs locaux pour la compétitivité du territoire.</p>