

# SOUTENANCE DE THESE

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soutiendra sa thèse de **Doctorat**

sur le sujet :

Estimation of the probability and uncertainty of undesirable events in large-scale systems

A l'Université de technologie de Compiègne  
Le jeudi 31 mars 2016 à 14h  
Amphi L103 – Centre Pierre Guillaumat

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### Résumé

The thesis objective is to build frameworks presents both aleatory and epistemic uncertainties based on probabilistic approach and uncertainty approaches and to compare these methods and find the proper applicatins for these methods in large scale systems with rare event. In this thesis, an asymptotic normality method is proposed with Monte Carlo simulation in case of binary systems as well as semi-Markov model for cases of dynamic multistate system. We also apply random set as a basic model to evaluate system reliability and other performance indices on binary and multistate systems with bootstrap technique.