# <http://lamos.org/equipeslamos/equipes/MAPMS.php>

**Intitulé de l’équipe :** Méthodes d’Analyse de Perturbation des Modèles Stochastiques (MAPMS)

L’analyse de perturbation des modèles stochastiques étudie la dépendance fonctionnelle des indices de performance de tels modèles par rapport à un certain paramètre. Dans ce domaine de recherche, plusieurs approches, ayant à la fois un aspect théorique et numérique, se développent pour l’analyse de plusieurs modèles stochastiques. L’équipe MAPMS s’intéresse principalement à développer quelques approches d’analyse de perturbation (développements en séries de Taylor, analyse de sensitivité, bornes de perturbation, troncature des espaces d’états, développements en séries, …) de certains modèles stochastiques, tels que les modèles markoviens et semi-markoviens de fiabilité, les modèles de génétique, les modèles de gestion de stocks, les modèles financiers, les modèles d'actuariat et les modèles d’attente et de réseaux de files d’attente. En particulier, cette équipe se penchera sur le cas de l’application des méthodes de perturbation sur le cas de certains modèles stochastiques. Cette équipe est constituée des enseignants chercheurs et des doctorants dont les compétences s’articulent autour de l’analyse de perturbation des modèles stochastiques.

**Les grandes thématiques de l’équipe sont :**

**1.** Analyse de perturbation des chaînes de Markov;

**2.** Analyse numérique des chaînes de Markov;

**3.** Évaluation de performances des systèmes;

**4.** Stabilité des processus aléatoires;

**5.** Analyse de perturbation en finance, actuariat et fiabilité;

**6.** Modélisation stochastique en bioinformatique;

**7.** Incertitude épistémique et optimisation robuste dans les modèles stochastiques.

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