



Du
03
MAI.
2024

16h00
-
17h00

SÉMINAIRE DES DOCTORANTS DE FIME

How to constrain the statistics of a stochastic evolution?

Institut Henri Poincaré
Salle 01

INSCRIPTION

Stochastic diffusions are widely used to model physical phenomena, the noise being useful to account for average effects which need not being specified. However, the proposed model is always an approximation that cannot exactly reproduce all the features of the real system (mean, variance, higher order moment...). From the law of large numbers, such a feature can be seen as an average of random realisations that one wants to bias to select the desired behavior.

This talk presents an approach based on the Gibbs conditioning principle to correct the statistics of a stochastic model. In the case of diffusion processes, an interesting PDE structure emerges from the correction procedure which allows for connections with stochastic control. Quantitative stability and regularity results are then proved when perturbing the constraints, showing the robustness of the correction procedure. This work is a collaboration with Giovanni Conforti (CMAP, Ecole Polytechnique) and Julien Reygner (Cermics, ENPC).

URL de la page : <https://www.ihp.fr/fr/agenda/how-constrain-statistics-stochastic-evolution>



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HORAIRES

L'institut :

- lundi au vendredi de 8h30 à 18h,
- fermé les jours fériés.

Le musée - Maison Poincaré :

- lundi, mardi, jeudi et vendredi de 9h30 à 17h30,
- samedi de 10h à 18h,
- fermé le mercredi et le dimanche.