Analyse des fluctuations des systèmes de particules de Fleming-Viot

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Résumé

The distribution of a Markov process with killing, conditioned to be still alive at a given time, can be approximated by a Fleming-Viot type particle system. In such a system, each particle is simulated independently according to the law of the underlying Markov process, and branches onto another particle at each killing time. The consistency of this method in the large population limit was the subject of several recent works. The purpose of this talk is to present a central limit theorem for the law of the Fleming-Viot particle system at a given time. We will illustrate this result on an application in molecular dynamics.

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