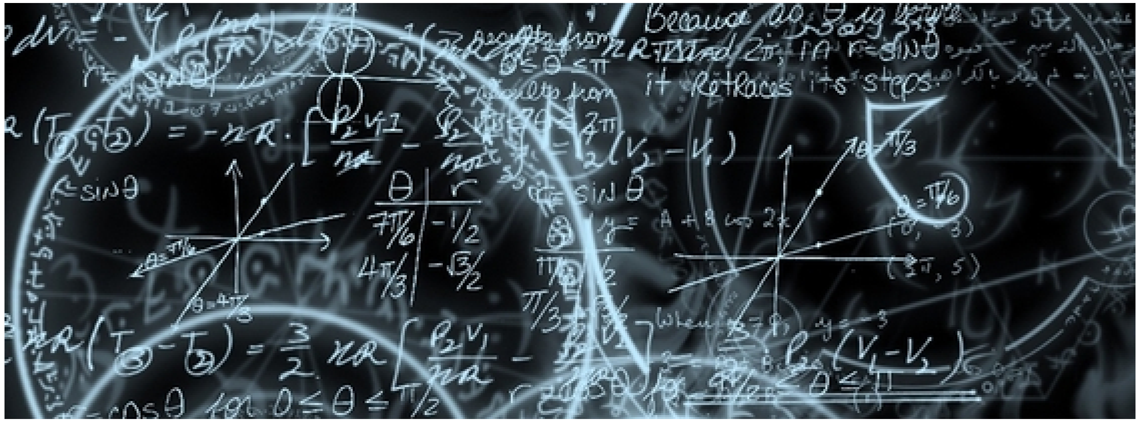
SEMINARIO DI DIPARTIMENTO - 20/05/2024



Lunedì 20 maggio alle ore 13.30 in Sala di Consiglio.

Lunedì 20 maggio alle ore 13:30, in Sala di Consiglio, si terrà il Seminario di Dipartimento del dott. G**iacomo Filippo Di Gesù,** risultato accettato a una procedura di Tenure Track per il potenziale inquadramento nel ruolo di professore di seconda fascia, SSD MAT/06.

Speaker: Giacomo Filippo Di Gesù

Titolo seminario: Sharp asymptotics for metastable stochastic processes

Abstract: Metastability phenomena show up in the dynamical behavior of a large variety of complex real world systems. From a mathematical point of view the dynamics of such systems may be modeled by means of stochastic differential equations, such as the Langevin equation at small temperature in molecular dynamics. An efficient computation of metastable dynamics over the long time scales of interest is a particularly challenging and important problem for applications.

VEDI ANCHE

Seminari (/ricerca/seminari)

Seminari di Dipartimento (/seminari-di-dipartimento)

Notiziario Scientifico (/ricerca/notiziario)

In this talk I will present some theoretical results providing sharp estimates on key quantities, such as metastable transition times, spectral gaps or exit point distributions. The results concern overdamped Langevin equations in Euclidean domains, discrete space diffusions arising as coarse-grained models in statistical mechanics, and infinite-dimensional systems such as the stochastic Allen-Cahn equation. The proofs are based on a spectral-theoretical approach and employ PDE tools of semiclassical analysis, adapted to the different settings.