Roma Tre

DIPARTIMENTO DI MATEMATICA E FISICA

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A variational approach for the 2D Abelian Yang–Mills–Higgs measure

Speaker: Ajay Chandra - Purdue University

Time: Tuesday December 15, 16:00-17:00

Location: Room B308, Largo S. Murialdo 1 (Roma)

Two dimensional abelian Yang–Mills–Higgs is perhaps the simplest gauge theory that does not enjoy exact solvability. The first construction of this model was carried out by Brydges, Fröhlich, and Seiler using phase space expansion techniques. More recently, Bringmann and Cao proved global well-posedness of the corresponding Langevin dynamics, and Bringmann, Cao, Hairer, and Zhao used stochastic quantisation to construct the non-abelian Yang–Mills–Higgs measure in two dimensions. I will describe a different construction of the abelian measure, based on a stochastic control representation called the Boué–Dupuis formula. This is joint work with Nikolay Barashkov, Ilya Chevyrev, Andreas Koller, and Abdulwahab Mohamed.