SEMPARIS – Séminaires en région parisienne

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Forum de Physique Statistique @ ENS

Mercredi 6 Novembre 2024, 14 :00
LPENS, L378(unusual time and venue)
Domaines : cond-mat.stat-mech

Titre : *Constructive Quantum Field Theory and stochastic fields*

Orateur : **Antoine Mouzard (Université Paris Nanterre)**

Résumé : *Quantum Field Theory is a major theory in modern physics and raises many important and hard mathematical questions. In this talk, I will present the approach of stochastic quantization to a mathematical construction of measures from QFT as invariant measures of stochastic dynamics. Infrared and ultraviolet divergences of the theory also appears in the stochasic PDEs and a renormalization procedure is also needed. In particular, the recent progress on the resolution of singular SPDEs provide a robust approach to a mathematical construction of such objects mainly dealing with ultraviolet divergences via the renormalization of Feynman diagrams.*