SCUOLA
NORMALE
SUPERIORE

SEMINARIO DI MATEMATICA

Giovedì 30 maggio 2013
ore 15:00

Scuola Normale Superiore
Pisa
Aula Bianchi

Prof. Michael Röckner

University of Bielefeld

Terrà un seminario dal titolo:

"Stochastic nonlinear Schrödinger equations with linear multiplicative noise: the rescaling approach"

Abstract:
We present well-posedness results for stochastic nonlinear Schrödinger equations with linear multiplicative Wiener noise including the non-conservative case. Our approach is different from the standard literature on stochastic nonlinear Schrödinger equations. By a rescaling transformation we reduce the stochastic equation to a random nonlinear Schrödinger equation with lower order terms and treat the resulting equation by a fixed point argument, based on generalizations of Strichartz estimates proved by J. Marzuola, J. Metcalfe and D. Tataru in 2008. This approach allows to improve earlier well-posedness results obtained in the conservative case by a direct approach to the stochastic Schrödinger equation. In contrast to the latter, we obtain well-posedness in the full range (1, 1 + 4/d) of admissible exponents in the non-linear part (where d is the dimension of the underlying Euclidean space), i.e. in exactly the same range as in the deterministic case.

Tutti gli interessati sono invitati a partecipare.

Classe di Scienze

Piazza dei Cavalieri, 7
56126 Pisa-Italy
tel: +39 050 509111
fax: +39 050 563513

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