SEMINARIO DI MATEMATICA

Mercoledì 21 marzo 2018
ore 16:00

Scuola Normale Superiore
Pisa
Aula Contini

Christopher Deninger
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terrà un seminario dal titolo:

"p-adic limits of renormalized logarithmic Euler characteristics"

Abstract:
Given a countable residually finite group G with a sequence of cofinite normal subgroups G_n whose intersection is trivial, we are interested in the sequence of multiplicative Euler characteristics of the groups G_n with coefficients in a G - module M. These Euler characteristics are the alternating products of the orders of the cohomology goups (assuming they are finite). For example a tower of finite covering spaces and a suitable local system on the base space will give rise to this situation. In general it is difficult to calculate the Euler characteristics of the individual groups G_n in a given module M, and it is therefore reasonable to look at their asymptotic behaviour. Until now only asymptotics as real numbers were studied. In the lecture we explain that a renormalized limit of the p-adic logarithms of the Euler characteristics exists as a p-adic number under suitable conditions. This gives arithmetic information on the sequence of Euler characteristics. The limit is a p-adic analogue of an L^2 - Reidemeister torsion introduced by Li and Thom. The motivation for the study comes from ergodic theory and in particular from the desire to define a notion of entropy with values in the p-adic numbers instead of the real numbers.

Tutti gli interessati sono invitati a partecipare.

Classe di Scienze

19/03/2018