

Analysis Seminar

Submitted by admin on Wed, 01/09/2013 - 19:02

Sphere Packing Bounds Via Spherical Codes

Series: Analysis Seminar

Henry Cohn

Microsoft Research New England/MIT

Date & Time: Tue, 01/22/2013 - 16:30 - 17:30

Location: S-101

Video Link:

<http://video.ias.edu/1213/analysis/0122-HenryCohn>

We develop a simple geometric variant of the Kabatiansky-Levenshtein approach to proving sphere packing density bounds. This variant gives a small improvement to the best bounds known in Euclidean space (from 1978) and an exponential improvement in hyperbolic space. Furthermore, we show how to achieve the same results via the Cohn-Elkies linear programming bounds, and we formulate a few problems in harmonic analysis that could lead to even better bounds. This is joint work with Yufei Zhao.

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Dorothea Phares

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Tue, 01/08/2013 - 19:11

Thu, 01/01/1970 (All day)

terms:

- [School of Mathematics](#)