SOUTHERN CALIFORNIA
FUNCTIONAL ANALYSIS SEMINAR

Saturday, November 12, 2011
2:00-4:30 PM

Claremont McKenna College
Freeburg Forum, Kravis Center LC62

2:00-3:00 PM, Lecture # 1:

ON ARITHMETIC PROPERTIES OF PROBABILITY MEASURE

Herbert Heyer
Universität Tübingen

Abstract

Central to the talk will be the comparison of various notions of Gaussian measures on a topological group G.They are introduced as measures on G which are embeddable into continuous one-parameter convolution semigroups or as infinitely divisible measures which by definition admit nth roots for every n. In this connection the question arises whether any infinitely divisible measure on a topological group G is in fact embeddable.This embedding property holds true for Euclidean spaces and more generally for locally convex vector spaces over the field of real numbers. Since the appearance of the speaker's monograph of 1975 much work has been devoted to solving the embedding problem within the framework of an arbitrary locally compact group, but in full generality the problem is still open. In order to convey at least some ideas on the approach towards the solution of the problem we shall restrict ourselves to Abelian groups and discuss a few nonstandard examples.

3:30-4:30 PM, Lecture # 2:

LIAPANOV'S CONVEXITY THEOREM WITHOUT COMPACTNESS BUT WITH APPLICATIONS

Daniel Wulbert
University of California, San Diego

Abstract

We will describe the classical Liapanouvs Convexity Theorem and its Functional Analytic Form. We will state a form of a recent extension of the theorem. Some of the tools used in the proof will be mentioned, but we wont give a detailed proof. In addition to recovering the Classical Theorem, the applications will include an extension of the Phelps-Dye Theorem (used to prove that no finite dimensional subspace of $L^1[0,1]$ admits unique best approximations to all L^1-functions), and an envy free cake cutting theorem.

Dinner at a local restaurant will follow the concluding lecture.
For more information, please contact Professor Asuman Aksoy at (909) 607-2769
or via email at asuman.aksoy@cmc.edu

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