Infinite dimensional euclidean lattices

Jean-Benoît Bost
Université Paris XI -Orsay

A euclidean lattice is the data of a finite dimensional real vector space E, of a euclidean norm $\|.\|$ on E, and of a lattice Γ in E. Euclidean lattices classically occur in crystallography and in many fields of pure and applied mathematics (geometry of numbers, Diophantine geometry, coding theory,...)

It turns out that infinite dimensional generalizations of euclidean lattices naturally appear in the investigation of various problems of arithmetic geometry. This talk will be an introduction to the study of these intriguing objects.