

abstract

LIE GROUPS, REPRESENTATIONS AND DISCRETE MATH

Topic:

Speaker:

Affiliation:

Date:

Time/Room:

The talk will be introductory. We will first explain what Kac-Moody groups are. These groups are defined by generators and relations, but they are better understood via their actions on buildings. The involved class of buildings is interesting since the buildings in general are not classical (i.e. neither spherical nor Euclidean); one can even choose them to have apartments isomorphic to some hyperbolic tilings. The starting point of the analogy between Kac-Moody groups over finite fields and arithmetic groups is the fact that Kac-Moody groups are lattices of their buildings (under mild assumptions). We will finish by listing the properties supporting the analogy (torsion, pro-p-subgroups in and topological simplicity of suitable completions, normal subgroup property). We will also mention the properties which show that the groups do form a new class (non-linearity, no Howe-Moore property etc.).