

Conference Ball Quotient surfaces and Lattices

John Parker :

Fundamental polyhedra for non-arithmetic lattices in $PU(2,1)$.

I will describe a recipe for building fundamental polyhedra for lattices in $PU(2,1)$ generated by three complex reflections. All the (currently) known non-arithmetic lattices in $PU(2,1)$ are (commensurable to) such groups where the complex reflections all have the same order. This is joint work with Martin Deraux and Julien Paupert, and is inspired by work of Mostow. The main difference with Mostow's work is that we do not obtain Dirichlet polyhedra in this way.