Algebra/Topology Seminar

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Diameters of 3-Sphere Quotients

Thursday, October 25, 2012
1:15 p.m. in ES-143

Abstract. I will report on joint work with Sarah Greenwald, Jill McGowan and Catherine Searle, resulting in lower bounds for diameters of quotients of S^3 by closed subgroups of $O(4)$ which act non-transitively (S^3 denotes the unit 3-sphere). My contribution was in the case where the subgroup is finite (so the quotient is a spherical orbifold of dimension three), but I will also discuss the other cases (when the orbit space has dimension one or two). The punch line is that the diameter is at least $\arccos\left(\tan(3\pi/10)/\sqrt{3}\right)/2$.