
 G_2 and the rolling ball

*John Baez and John Huerta**

Instituto Superior Tecnico, Lisbon, Portugal

The search for simple models of the exceptional Lie groups is a long standing problem in mathematics. In this talk, we use the split octonions to explain how the smallest exceptional Lie group, G_2 , can be thought of as the symmetry group of a ‘spinorial ball’ rolling on a projective plane precisely 3 times as big.