

G_2 AND THE ROLLING BALL

John Huerta

CAMGSD, Instituto Superior Técnico

e-mail: jhuerta@math.ist.utl.pt

Resumo: The search for simple models of the exceptional Lie groups is a long standing problem in mathematics. In this talk, we use a nonassociative algebra known as 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. This is joint work with John Baez and James Dolan [1].

palavras-chave: exceptional groups; geometry; octonions.

Referências

- [1] J. Baez and J. Huerta, G_2 and the rolling ball, to appear in *Transactions of the American Mathematical Society*. Available as arXiv:1205.2447.