ANNE QUÉGUINER-MATHIEU, Universités Paris 12 / Paris 13

Pfister's theorem for orthogonal involutions

In the 60's, Pfister proved strong theorems describing quadratic forms of even dimension ≤ 12 that have trivial discriminant and Clifford invariant, i.e., that are in I^3. His results have been extended to quadratic forms of dimension 14 in I^3 by Rost in 1999. One knows also extensions of these theorems where quadratic forms are replaced by central simple algebras with orthogonal involution, except in degree 12. Using Rost's argument—that is the fact that a projective representation of Spin_{12} has an open orbit—we produce a generalization of Pfister's result; the statement is in terms of 'quadratic extensions' of algebras with involution.

This talk is based on a joint work with S. Garibaldi.