Algebra Seminar

Yuri Bahturin,
Memorial University

Classification of Real Graded Division Algebras
(joint with Mikhail Zaicev)

Abstract:

An associative algebra A graded by a group G is called a graded division algebra if every nonzero homogeneous element is invertible. We give a complete classification, up to equivalence, of real graded division algebras A, in the case where A is finite-dimensional and the group G is abelian. As a consequence, we can describe all real finite-dimensional graded simple algebras.