Automorphisms of even unimodular lattices.
Eva Bayer, EPFL

We characterize the irreducible polynomials that occur as a characteristic polynomial of an automorphism of an even unimodular lattice of given signature, generalizing a theorem of Gross and McMullen. As part of the proof, we give a general criterion in terms of Witt groups for a bilinear form equipped with an action of a group $G$ over a discretely valued field to contain a unimodular $G$-stable lattice.