## Algebra Seminar

On a Question of Gross and McMullen

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**Abstract:** In a joint work with Lenny Taelman, we characterize the irreducible polynomials that occur as a characteristic polynomial of an isometry of an even, unimodular lattice with given signature, answering a question of Gross and McMullen. It turns out that the criteria are local ones, and that in the case of an irreducible polynomial, one has a local-global principle. This is no longer true for reducible polynomials. The aim of the talk is to describe these results, and give to a criterion for the local-global principle to hold.

Tuesday, October 16, 2018, 4:00 pm Mathematics and Science Center: W301

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