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**Markoff triples, graphs and strong approximation**

We describe joint work with Bourgain and Gamburd concerning divisibility properties of Markoff numbers and the execution of an elementary sieve on these. These numbers arise as the co-ordinates of Markoff triples which are an orbit of a group of (nonlinear) affine morphisms of affine 3-space. While a theory of an affine sieve for linear actions has been developed, the non-linearity and sparsity in the above setting introduces serious obstacles.