

October 7, 1999

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Zeros of quadratic forms over function fields of p -adic curves

It is a longstanding open question whether any quadratic form in nine variables over the rational function field in one variable over the field of p -adic numbers has a nontrivial zero. In fact it was not even known until recently whether there existed quadratic forms in arbitrarily large number of variables over this field with no nontrivial zero. In this talk, we describe some recent results leading to the fact that every quadratic form in eleven variables over function fields of curves over p -adic fields, p an odd prime, has a nontrivial zero. (Joint work with V. Suresh).