Towards a conjecture of Wooley

Nick Rome

TU Graz

Given a cubic form with integer coefficients in n variables, in joint work with V. Kumaraswamy, we show that for large enough n the number of zeroes in a box of sidelength B grows at least as quickly as B^{n-9} . In particular, we make no assumptions about the singularities of the form. This resolves a conjecture of Wooley for forms of large enough dimension.