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## K-Theory, Quadratic Forms and Number Theory Seminar

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**Dr. David Brink (UCD)**

will speak on

**The density of integers of the form  $u^2 + nv^2$**

Wed 3rd February 2010 at 4:00PM

Location: Mathematical Sciences Seminar Room

Let  $B(x)$  denote the number of positive integers up to  $x$  of the form  $u^2 + v^2$ . It is a famous result of Landau that  $B(x)$  grows as  $0.7642\dots$ . In his doctoral thesis, Landau's student Bernays showed more generally that the number  $B_n(x)$  of positive integers  $nv^2$  grows as  $b_n x / \sqrt{\log x}$  with some constant  $b_n$ . In this talk we discuss a conjecture of Shanks and Schmid that  $b_2 = 0.8728\dots$  is maximal among these constants.

This talk is part of the **K-Theory, Quadratic Forms and Number Theory** series. For more, see <https://maths.ucd.ie/seminars>