



**UCD School of  
Mathematics and Statistics**

University College Dublin  
Belfield, Dublin 4, Ireland

Tel +353 1 716 2580  
Fax +353 1 716 1196

**Scoil na  
Matamaitice agus na Staitisticí UCD**

An Coláiste Ollscoile, Baile Átha Cliath  
Belfield, Baile Átha Cliath 4, Éire

Email [seminars@maths.ucd.ie](mailto:seminars@maths.ucd.ie)  
Web [maths.ucd.ie/seminars](https://maths.ucd.ie/seminars)

## Algebra and Number Theory Seminar

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**Professor David Leep (University of Kentucky)**

will speak on

**The  $u$ -invariant of  $p$ -adic function fields**

**Mon 10th May 2010 at 4:15PM**

Location: Mathematical Sciences Seminar Room

The  $u$ -invariant of a field  $F$  is the smallest integer  $N$  such that every quadratic form defined over  $F$  in more than  $N$  variables has a nontrivial zero defined over  $F$ . The  $u$ -invariant has been calculated for many familiar fields such as algebraically closed fields, finite fields,  $p$ -adic fields, number fields, and power series fields over these fields. The  $u$ -invariant has also been calculated for function fields over algebraically closed fields and finite fields.

Computing the  $u$ -invariant of a function field defined over a  $p$ -adic field has only recently been solved. This talk will give the computation of the  $u$ -invariant over  $p$ -adic function fields. We will discuss the history and background to this result.

[Please note the later starting time of 4.15pm.]

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