

代数セミナー

Speaker :

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Date : December 3, 2007 (Monday)

Time : 16:30 - 17:30

**Place : Room 14-201, 2nd Floor, Bldg.14
Faculty of Science and Technology
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On classification of arithmetic hyperbolic reflection groups

Finiteness of the number of arithmetic hyperbolic reflection groups was established in full generality in 2006. E.g., see math.AG/0609256.

Recently, I found explicit bounds for degree (over \mathbb{Q}) of ground fields of these groups in dimensions at least 3. See [arXiv: 0708.3991](http://arXiv.org/abs/0708.3991), [0710.0162](http://arXiv.org/abs/0710.0162), [0710.2340](http://arXiv.org/abs/0710.2340). This implies a principal possibility to get an effective, finite classification of these groups in all dimensions together (they don't exist in dimension greater than 29). This would be important for K3 and other algebraic varieties, and for hyperbolic (Borcherds) Kac-Moody Lie algebras.