

**GCOE レクチャーズ**  
**グローバル COE プログラム 「数学新展開の研究教育拠点」**

- DATE I. February 17 (Wed), 2010, 10:30–11:30  
II. February 17 (Wed), 2010, 15:00–16:00  
III. February 18 (Thu), 2010, 10:30–11:30  
IV. February 18 (Thu), 2010, 15:00–16:00  
V. February 19 (Fri), 2010, 10:30–12:00
- PLACE Room 126, Graduate School of Mathematical Sciences
- SPEAKER **Yves Benoist** (Orsay)
- TITLE Discrete groups acting on homogeneous spaces I–V
- ABSTRACT In this course I will focus on recent advances on our understanding of discrete subgroups of Lie groups.  
I will first survey how ideas from semisimple algebraic groups, ergodic theory and representation theory help us to understand properties of these discrete subgroups.  
I will then focus on a joint work with Jean-Francois Quint studying the dynamics of these discrete subgroups on finite volume homogeneous spaces and proving the following result:  
We fix two integral matrices  $A$  and  $B$  of size  $d$ , of determinant 1, and such that no finite union of vector subspaces is invariant by  $A$  and  $B$ . We fix also an irrational point on the  $d$ -dimensional torus. We will then prove that for  $n$  large the set of images of this point by the words in  $A$  and  $B$  of length at most  $n$  becomes equidistributed in the torus.

世話人：小林俊行

<http://www.ms.u-tokyo.ac.jp/~toshi/seminar/ut-seminar.html>