ZURICH GRADUATE COLLOQUIUM

Tuesdays, 5:15 pm
HG G3, ETH Zentrum
in alternation with the
Zurich Colloquium in Mathematics

Speaker:	**Chenchang Zhu**
Title:	**Why stacks are useful in Lie theory**
Date:	Tuesday, October 26

We all know that a Lie algebra has an associated simply connected Lie group guaranteed by Lie's III theorem. However, Lie's III does not hold for a geometrical generalization of Lie algebras – Lie algebroids (roughly, bundles with fibres Lie algebras), namely, not any Lie algebroid has an associated Lie groupoid. It turns out that if we enter the world of stacks and make sense what a stacky groupoid is, this problem will naturally be solved! In fact, this stacky groupoid *is* a 2-truncation of some simplicial manifold appearing in Lie theory. Notations such as algebroids, groupoids, stacks, will be explained.

`http://www.math.ethz.ch/graduate/colloquium`
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