

# Algebra Seminar

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**Thursday, July 23, 2015**  
**1100-12:00 noon, HH-2010**

Outer restricted derivations of nilpotent restricted  
Lie > algebras

We characterize finite-dimensional nilpotent restricted Lie algebras having an outer restricted derivation whose square is zero. This is the restricted analogue of a result of Togo on the existence of nilpotent outer derivations of ordinary nilpotent Lie algebras in arbitrary characteristic and the Lie-theoretic analogue of a classical group-theoretic result of Gaschutz on the existence of  $p$ -power automorphisms of  $p$ -groups. This is a joint work with J. Feldvoss and Th. Weigel.