

COLLOQUIUM
UNIVERSITY OF PITTSBURGH
TUESDAY, JANUARY 26, 2016

704 THACKERAY HALL
3:00 P.M.

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UNIVERSITY OF PITTSBURGH

**ALGEBRAIC TORI AND A COMPUTATIONAL
INVERSE GALOIS PROBLEM**

ABSTRACT: Algebraic tori play a central role in the structure theory and representation theory of algebraic groups. I will describe an ongoing project to investigate algebraic tori over p -adic fields. The project naturally divides into two parts: finding finite subgroups of $GL(n, Z)$ and listing all p -adic fields with a given Galois group. I will summarize existing work on the first part, and present a new algorithm for the second problem.

I will include an introduction to algebraic tori, p -adic fields and local class field theory for members of the audience who have not studied these topics or need a refresher.

Refreshments served at 2:30 p.m.
in the Math Dept. COMMON ROOM, Thackeray 705

*The speaker is a candidate for a position in the Department.