Temple University Mathematics Colloquium

David Harbater
University of Pennsylvania

will speak on

Galois groups and geometry

ABSTRACT: Galois theory is analogous to the theory of covering spaces, with absolute Galois groups corresponding to fundamental groups. By using this parallel, one can carry over ideas from algebra to geometry and vice versa. After discussing this parallel, the talk will present results on the existence of covers with given covering groups, and on the structure of absolute Galois groups of certain fields that arise in geometric contexts. In particular, a number of such absolute Galois groups turn out to be free, e.g. for the field of functions on a real curve with no real points, and for the field of germs of functions near a point in complex 2-space with all n^{th} roots adjoined.

Monday, September 11, 2006
Lecture at 4:00 pm ($\sharp$)
Coffee, tea, and refreshments from 3-5 pm
Room 617, Wachman Building
Department of Mathematics