

Train Tracks, Diffeomorphisms of Surfaces and Automorphisms of Free Groups

A COURSE FOR UNDERGRADUATES

Instructor:

Mladen Bestvina,
Department of
Mathematics,
University of Utah

Dates:

July 7 - 18, 2014

Location:

University of Utah
Salt Lake City, Utah

Eligibility:

US citizens
and permanent
residents

Application Deadline:

March 21, 2014

In the 1970s, Thurston introduced the notion of train tracks as a combinatorial tool for studying simple closed curves on surfaces. This notion played an important role in his study of self-diffeomorphisms of surfaces. In the 1980s, Bestvina and Handel introduced a parallel notion of train tracks for free group automorphisms giving a uniform way to study both the mapping class group and the group of outer automorphisms of free groups. This has proven to be a powerful tool and this course will provide an introduction to the topic for advanced undergraduates given by one of its originators.

**For more information and an application see
www.math.utah.edu/agtrtg/traintracks**

The course is supported by the Research Training Grant: Algebraic Geometry and Topology at Utah.
For students admitted to the course, all associated costs will be covered by the grant.

The RTG supports research in algebraic geometry and topology at the University of Utah, including graduate and postdoctoral fellowships. Further information can be found at www.math.utah.edu/agtrtg.



National Science Foundation