



THE WORLDWIDE CENTER OF MATHEMATICS

The Motivic Fundamental Group



Marc Levine

Northeastern University, Boston, MA, USA

Friday, May 22, 2009

Coffee, tea, cookies: 3:30pm

Talk: 4-5pm

929 Massachusetts Ave., Cambridge, Suite #102

Abstract: Building on results of Beilinson, Deligne and Goncharov have constructed a version of the fundamental group of an open subset U of the projective line as a algebraic group object in the category of mixed Tate motives over a number field k . One can think of this as the Malcev completion of the topological fundamental group endowed with an action of the Tannaka group of the category of mixed Tate motives over k . Together with Esnault, we have seen how to identify the resulting semi-direct product group as the Tannaka group of the category of mixed Tate motives over U . In other words, a mixed Tate motive over U is just a local system on U of mixed Tate motives over k .

The Worldwide Center of Mathematics, www.centerofmath.org, is located midway between Harvard and Central Squares, at 929 Massachusetts Avenue, Cambridge, MA, in Suite #102. Travel to the Center by public transportation is easy via the #1 bus, or by taking the subway (the T) to Central Square, and walking for 10 minutes. Suite #102 is located on floor 01, which is distinct from floor 1.

All attendees will need to sign a release form, as the lecture will be recorded for distribution on the Web.