



THE WORLDWIDE CENTER OF MATHEMATICS

Lehmer's Problem and Dilatations of Mapping Classes



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Friday, August 21, 2009
Coffee, tea, cookies: 3:30pm
Talk: 4-5pm

Abstract: Lehmer's problem (1933) asks about the complexity of algebraic integers: how are the sizes of algebraic integers distributed along the real line? By size, we mean the Mahler measure of an algebraic integer, that is, the absolute value of the product of algebraic conjugates with norm greater than one. It is not known whether there are gaps in the set of Mahler measures, or how the minimal Mahler measure greater than one behaves as a function of degree. Similar questions can be asked about dilatations of mapping classes. How does the minimal dilatation of a pseudo-Anosov mapping class change as the genus increases? We discuss these questions and some recent results.

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.