

# The Oliver Club

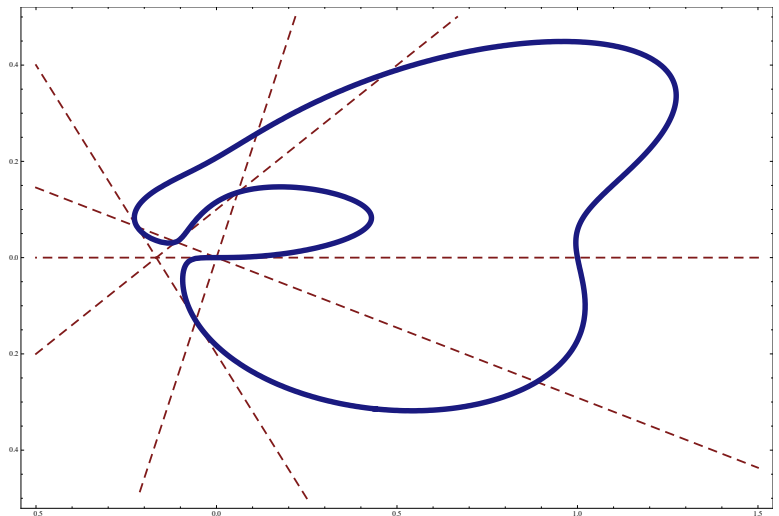
[www.math.cornell.edu/~oliver/](http://www.math.cornell.edu/~oliver/)

**Ronen Mukamel**, Harvard University

## ***Billiards, The Square Root of Eleven, and a Teichmüller Curve of Genus One***

*A Teichmüller curve is an algebraic and locally isometric immersion of an algebraic curve into the moduli space of Riemann surfaces. We will present the first explicit algebraic model for a Teichmüller curve of genus greater than zero. Our example emerges from the study of billiards in L-shaped polygons and the Hilbert modular surface associated to the square root of eleven.*

*We will also give algebraic models for other higher genus Teichmüller curves and present evidence, drawn from our examples, that Teichmüller curves are arithmetically interesting. Our models are all obtained by studying certain Hilbert modular forms. This work is joint with A. Kumar.*



**Thursday, March 6, 2014**  
**at 4:00 PM in 532 Malott Hall**

Refreshments will be served at 3:30 PM in the Mathematics Department lounge (532 Malott Hall).