

# The Oliver Club

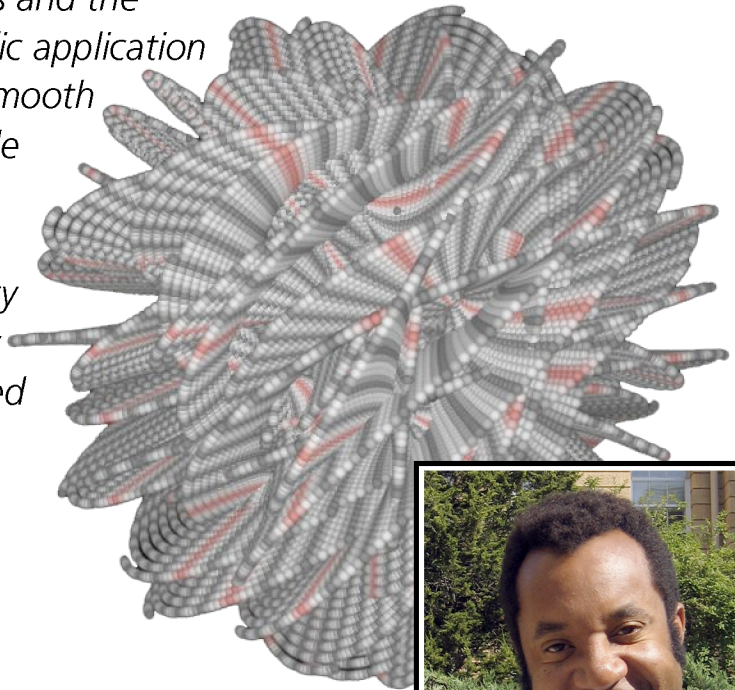
[www.math.cornell.edu/~oliver/](http://www.math.cornell.edu/~oliver/)

**Sean Paul**, University of Wisconsin

## ***Hyperdiscriminant Polytopes, Chow Polytopes, and Mabuchi Energy Asymptotics***

*Let  $(X,L)$  be a polarized algebraic manifold. I have recently proved that the Mabuchi energy of  $(X,L)$  is bounded from below along any degeneration if and only if the hyperdiscriminant polytope dominates the Chow polytope (with respect to the various Kodaira embeddings). This completes the analysis initiated by Ding and Tian in their 1992 Inventiones paper "Kähler Einstein metrics and the Generalized Futaki Invariant." As a specific application of this, I show that the dual variety of a smooth curve of genus greater than one has stable singularities.*

*Despite the abstract, the talk is elementary — almost radically so. Graduate students (and even undergraduates) are encouraged to attend.*



**Thursday, April 2, 2009**  
**at 4:25 PM in 251 Malott Hall**

Refreshments will be served at 3:55 PM in the Mathematics Department lounge (532 Malott Hall).