
NAM LE, Indiana University

Approximating minimizers of the Rochet-Chone functional with non-quadratic costs by solutions of singular Abreu equations

The Rochet-Chone model for the monopolist problem in product line design is a variational problem with a convexity constraint. This constraint renders serious challenges in numerically computing its minimizers, and calls for robust approximation schemes. In this talk, we show that, for a full range of q , minimizers of the Rochet-Chone functional with a convexity constraint in two dimensions can be approximated in the uniform norm by solutions of singular, fourth order Abreu equations that arise in extremal metrics in complex geometry.