TITLE: Asymmetric information, obstacle problems, and convexity constraints in the calculus of variations

ADVISOR: Robert McCann

This project aims to investigate analytic and geometric questions in the economics of asymmetric information. A wide class of such questions can be reduced to optimization problems in the calculus of variations under a convexity constraint. Without the convexity constraint they would fall into the more better understood framework of obstacle problems. The goal of this project is to explore the relation between these two frameworks,   in the hopes of shedding new light on unresolved issues.   Over the course of the summer, students will meet with the advisor, review surrounding literature, study recent techniques, explore research problems, and summarize the outcomes of the research in an appropriate academic forum.