

DESCRIPTION FOR THE GENERAL PUBLIC

The aim of this project is to use the methods of optimal transport theory to complex geometry. The optimal transport problem is very old as it goes back to late 18th century. In simplest terms the problem is the following: we have some quantity of material in some area, and we want to move it to some other area, what is the way to do it that would cost the least? It is a very hard mathematical problem with vast applications. It was studied intensely in the last 30 years.

We want to use the theory for that problem to investigate some questions that arise in Kähler geometry. It is a vast subject, so we want to limit our investigation to the case of toric manifolds where those methods seem to have most immediate application.