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DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE

Colloquium

ON THE REGULARITY OF OPTIMAL TRANSPORT MAPS

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ABSTRACT:

The problem of optimal resource allocation likely dates back to the earliest days of civilization. Yet the first modern formulation of it, known as the optimal transport problem, is attributed to Gaspard Monge (1781). More than 200 years later, a solution was found, and because of it, surprisingly, an explosion of progress in many seemingly unrelated areas of mathematics has been made: fluid mechanics, functional analysis, geometry, and probability. In this talk, we will discuss Monge?s problem, focusing on the regularity or smoothness of solutions in the model setting (the quadratic cost case). We will also mention some related open problems and, time permitting, applications and new directions.

$4 - 5$pm
Wednesday, December 7, 2022
Room 204, Smith Hall