

Geometry and the complexity of matrix multiplication

J M Landsberg
Texas A&M University

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Core Lecture Hall (Room 101)

Abstract

It has been known for some time that algebraic geometry and representation theory are useful for proving lower bounds on the complexity of the matrix multiplication operator. In this talk I will explain how geometry can be used to prove both upper and lower bounds. After a discussion of the problem and its history, I will present very recent work with M. Michalek on border rank algorithms.

Faculty Host: Eric Allender