

## **Algorithms for matrix multiplication via geometry**

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It has been known for some time that geometry and representation theory are useful for proving lower bounds for the complexity of matrix multiplication. Recent work gives one hope to use geometry to construct explicit algorithms for fast matrix multiplication. In addition to matrix multiplication, I will discuss the larger geometric context of the method, including the generalized Comon conjecture. This is joint work with L Chiantini, J. Hauenstein, C. Ikenmeyer and G. Ottaviani.