Department of Mathematics,
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Department Colloquium

Jeff Viaclovsky

UCI

Gravitational instantons and algebraic surfaces

Abstract:

Geometers are interested in the problem of finding a "best" metric on a manifold. In dimension 2, the best metric is usually one which possesses the most symmetries, such as the round metric on a sphere, or a flat metric on a torus. In higher dimensions, there are many more classes of geometrically interesting metrics. I will give a general overview of a certain class of Einstein metrics in dimension 4 which have special holonomy, and which are known as "gravitational instantons." I will then discuss certain aspects of their classification and connections with algebraic surfaces.

Lei Ni

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