Noncollision Singularities in a Planar Four-body Problem

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Abstract

In this talk, we show that there is a Cantor set of initial conditions in a planar four-body problem such that all the four bodies escape to infinity in finite time avoiding collisions. This proves the Painlevé conjecture for the four-body case. This work is based on an ideal model of Gerver and a joint work with Dmitry Dolgopyat.

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