GEOMETRIC ANALYSIS SEMINAR

"Noncollision singularities in Newtonian four-body problems."

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Abstract: Noncollision singularities in Newtonian N-body problems are those initial conditions leading to solutions escaping to infinity within finite time. Their existence was conjectured by Painleve. After considerable progresses made in the last century, the remaining open case is N=4. In this talk, we explain our work on the existence of noncollision singularities in two different models of four-body problem. In the first model, two large bodies move apart, one light body is captured by one large body and the other light body shuttles between the two large bodies.

In the second model, there is a pair of light bodies doing nearly Kepler elliptic motion and traveling between two moving apart large bodies.

Wednesday, February 20th, 2019
MIT, Room 2-131
Time: 4:00 PM