



ICTS Seminar

Title : Plane rational curves with an m -fold point

Speaker : Anantadulal Paul, (ICTS-TIFR, Bengaluru)

Date : Monday, 9th October 2023

Time : 12:00 PM (IST)

Abstract : Studying moduli spaces of stable maps and quantum cohomology theory plays a prominent role in modern enumerative geometry. A landmark result in this area is Kontsevich's recursion formula to enumerate rational curves in projective space. In this talk, we shall speak about the enumeration of plane rational curves with an ordinary m fold point (joint work with Indranil Biswas, Ritwik Mukherjee, Chitrabhanu Chaudhuri, and Apratim Choudhury). In particular, we shall explain our approach to the following question: how many rational degree d curves are there in CP^2 that have an m -fold singular point and that passes through $3d+1-m$ generic points? Earlier approaches solved this question only for $m = 3$. The question was practically beyond reach for $m \geq 4$. We have managed to solve this question for all m by simply developing a family version of Kontsevich's recursion formula. If time permits, we shall discuss some future problems.

Venue : Chern Lecture Hall & Online

Zoom link: <https://icts-res-in.zoom.us/j/83482036629?pwd=8T3pl2QUwcYffl1EjOuN0Qriy5yqAe.1>

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