



INDIAN STATISTICAL INSTITUTE
Theoretical Statistics and Mathematics Unit, Kolkata

SEMINAR

Date: February 03, 2023, Friday
Time: 03:00 PM

VENUE:

L-infinity
(5th Floor, A.N. Kolmogorov Bhavan), ISI Kolkata

TITLE:

Resurgence in enumerative geometry

SPEAKER:

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ABSTRACT:

Gromov–Witten and Donaldson–Thomas invariants are enumerative invariants that can be defined for any Calabi–Yau threefold. Roughly speaking, GW invariants count holomorphic curves together with a parametrization while DT invariants count them together with the data of the equations defining them. These two different ways of interpreting a curve lead to different behavior under degenerations and so different counts. Nevertheless, it has been conjectured by Maulik–Nekrasov–Okounkov–Pandharipande that knowing any one of these two sets of invariants is sufficient to completely determine the other. Motivated by physical intuition from topological string theory, we shall be exploring in this talk an elegant realization of this equivalence in the case of the resolved conifold, a particular example of a noncompact Calabi–Yau threefold, within the framework of resurgence theory. This is based on the arXiv preprint 2109.06878 with Murad Alim, Jörg Teschner, and Iván Tulli, accepted for publication in Communications in Mathematical Physics.

ALL ARE CORDIALLY INVITED