

## Refined Gromov-Witten invariants

*Tuesday 7 October 2025 11:30 (1 hour)*

I will discuss a definition of refined curve counting invariants of Calabi-Yau threefolds with a  $C^*$ -action in terms of stable maps on Calabi-Yau fivefolds. The corresponding disconnected generating function should conjecturally equate the Nekrasov-Okounkov K-theoretic membrane index under a refined version of the Gromov-Witten/Pandharipande-Thomas correspondence. I'll present several acid tests validating the conjecture, both in the A and the B-model. This is based on joint work with Yannik Schuler (ETH Zurich), arXiv:2410.00118.

**Presenter:** BRINI, Andrea (University of Scheffield)