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Dolbeault Geometric Langlands conjecture via quasi-BPS categories

Thursday 6 February 2025 14:00 (1 hour)

In this talk, I will introduce the notion of 'limit category' for cotangents
of smooth stacks, which is expected to give a categorical degeneration of the category
of D-modules on them. I show that the limit category for the moduli stack of Higgs
bundles admits a semiorthogonal decomposition into products of quasi-BPS categories,
which are categorifications of BPS invariants of some non-compact Calabi-Yau 3-folds.
I propose the formulation of Dolbeault Geometric Langlands conjecture using the
limit category, which is regarded as a classical limit of Geometric Langlands correspondence.
I also show that the limit category admits Hecke operators. This is a joint work in
progress with Tudor Padurariu.

Presenter: TODA, Yukinobu