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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