

Non-archimedean geometry and degenerations of CY hypersurfaces

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SYZ predicts that Calabi-Yau varieties admit special Lagrangian fibrations which conjecturally should be determined by non-archimedean data. With Léonard Pille-Schneider, I constructed a non-archimedean analogue of the classical SYZ fibration for quartic K3 surfaces and quintic 3-folds, which is compatible with expectations from mirror symmetry. In a work in progress with Mattias Jonsson and Nick McCleerey, we solve a non-archimedean conjecture which is the missing step to prove that classical SYZ fibrations exist on a large open region of CY hypersurfaces in \mathbb{P}^n .

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