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Special Lagrangian fibrations and mirror symmetry

This talk will focus on a geometric proposal for constructing the mirror of a compact Kähler manifold equipped with an anticanonical divisor, extending the Strominger–Yau–Zaslow conjecture beyond the Calabi–Yau case. The mirror manifold is constructed as a (complexified) moduli space of special Lagrangian tori, and the Landau–Ginzburg superpotential is defined by a weighted count of holomorphic discs. We will give examples, both in the toric and in the non-toric setting, to illustrate the construction and the manner in which instanton corrections arise from exceptional discs and wall-crossing phenomena.