Special Lagrangian fibrations and mirror symmetry

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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.

1:00 p.m.
Math 520
Columbia University