

RANDOM SURFACES AND ALGEBRAIC CURVES

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Certain random matrix and random partition models are known to be related to enumerative geometry of algebraic curves. In this talk, I will describe some more general random surface models enumerating curves in certain complex 3-folds. There exist, in fact, a direct link between the geometry of the random surface and geometry of the 3-fold based on the conjectural equivalence of Gromov-Witten and Donaldson-Thomas theories.