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*Gromov-Witten Invariants via Deformations of Kahler Surfaces.*

On a compact Kähler surface, each holomorphic section of the canonical bundle provides, in a canonical way, a deformation to a non-integrable almost complex structure. These deformations partially regularize the space of holomorphic maps. This provides insight into the question of what geometric information is encoded in the Gromov-Witten invariants and leads to a “structure theorem” for the Gromov-Witten invariants for Kähler surfaces with  $p_g > 0$ . (Received February 14, 2006)