

Li–Yau type inequality for the p -bending energy

Kensuke Yoshizawa

Kyushu University

Li–Yau obtained the sharp inequality that the Willmore energy of a closed surface is bounded below by 4π times multiplicity. Its one-dimensional counterpart involving the so-called bending energy for planar curves has also been studied. In this talk, we generalize the bending energy to the p -bending energy for $p > 1$ to discuss analogous results, and then reveal some new phenomena on its optimality arising from the generality of $p > 1$. This talk is based on a joint work with Prof. Tatsuya Miura (Tokyo Institute of Technology).