"A continuous symmetrization and its applications to variational problems".

Hiroshi Matano

Abstract:

Various symmetrization techniques such as Schwarz symmetrization and Steiner symmetrization are known to be a useful method for studying the nature of global minimizers of variational problems. The main feature of such symmetrization is that it deforms a function without changing the measure of each level set (equimeasurable rearrangement) and decreases the energy of the function, such as the Dirichlet integral. In this lecture I discuss the concept of a continuous symmetrization, which deforms a function into its symmetrized profile continuously. This allows symmetrization techniques to be applicable not only to global minimizers but also to local minimizers.