Abstract

Based on a joint work with Liguang Liu at Renmin University, this talk will address an intrinsic nature of the Stein-Weiss H^1-inequality in harmonic analysis via the geometric trace and duality principles induced by Riesz's singular integral. Interestingly, we find an improved Fefferman-Stein BMO-decomposition and a unique solution to the Bourgain-Brezis BMO-problem.