Epi/hypo convergence of bifunctions on general domains and approximations of quasivariational problems

Phan Quoc Khanh *

Abstract

Epi/hypo convergence is extended to the case of finite-valued bifunctions defined on general nonrectangular domains. Its basic characterizations are established. Variational properties such as those about saddle points, weak saddle points, minsup-points, sup-projection, etc, of bifunctions are shown to be preserved for their epi/hypo limits (possibly under some additional assumptions). Applications to quasiequilibrium problems and multiobjective quasioptimization together with their dual problems are provided. The obtained results are new, some are significantly different from the counterparts for the rectangular case and some improve known results, when applied to this special case.

*International University, Vietnam National University-Hochiminh City