

Ihor Stasyuk

Linear, simultaneous extensions of (pseudo)metrics

with E.D.Tymchatyn

Let (X, d) be a complete metric space. We prove that there is a continuous, regular, linear extension operator from the space of all partial, continuous, bounded pseudometrics with closed, bounded domains in X endowed with the Hausdorff metric topology to the space of all continuous, bounded, pseudometrics on X with the topology of uniform convergence on compact sets. Also our operator can be modified and improved to preserve metrics. Although this new operator is not regular it can be chosen to have norm greater than but arbitrarily close to 1. Our result is a variant of the recent result of E.D. Tymchatyn and M. Zarichnyi obtained for continuous (pseudo)metrics defined on closed, variable domains in a compact metric space.