INSUFFICIENT DATA AND FUZZY AVERAGES

G.Sirbiladze, A.Sikharulidze

I.Vekua Institute of Applied Mathematics
Tbilisi State University
380043 University Street 2, Tbilisi, Georgia

Abstract

In this work three new versions of the Most Typical Value (MTV) of population are introduced - generalised weighted averages. The first version, WFEV_g, is a generalised version of the Weighted Fuzzy Expected Value (WFEV) for any fuzzy measure g on a finite set and, of course, it coincides with the WFEV used in sampling probability distribution. The second and third versions are the Weighted Fuzzy Expected Intervals WFEI and WFEI_g. These are generalisations of WFEV, the MTV-s of population respectively for sampling distribution and for any fuzzy measure g on a finite set, when the Fuzzy Expected Interval (FEI) exists but the Fuzzy Expected Value (FEV) does not. The work based on the Friedman-Schneider-Kandel (FSK) principle.

Key words and phrases: Fuzzy averages, weighted averages, fuzzy measure, Weighted fuzzy expected intervals.

AMS subject classification: 28E10.