Probabilistic Soft MultiSet Theory

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Abstract

The concept of soft set theory as a general mathematical tool for dealing with uncertainty was introduced by Molodtsov in 1999. Alkhazaleh and Salleh in 2011 introduced the definitions of a soft multiset as a generalization of Molodtsov’s soft set, [2]. In this paper, we incorporate Alkhazaleh and Salleh’s soft multiset theory with probability theory, [1] and then propose the notion of probabilistic soft multisets. We define equality of two probabilistic soft multisets, subset, complement of a probabilistic soft multiset, impossible probabilistic soft multiset, certain probabilistic soft multiset with examples. We also introduce the operations of union, intersection, difference and symmetric difference on probabilistic soft multisets.

Keywords: Soft Sets, Soft multisets, Probabilistic soft sets, Probabilistic soft multisets, Probabilistic soft multisets operation

References
