Abstract

In this paper, soft union ring (SU-ring) on a soft set is defined by using union operation of sets. This new concept shows how a soft set effects on a ring structure in the mean of union and inclusion of sets and from this overview, it functions as a bridge among soft set theory, set theory and ring theory. Then, its basic properties are derived and the relationship between soft intersection ring defined in [N. Cagman and F. Citak and H. Aktas, Soft intersection ring and its algebraic applications, Journal of Intelligent and Fuzzy Systems, 28 (3): 1225-1233 (2015)] and SU-ring are investigated. Furthermore, we give the applications of SU-ring to ring theory.

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Index Terms

Computer Science  Applied Mathematics

Keywords

Soft sets, SU-rings, sub-SU-rings, SU-ideals, soft anti-images, soft pre-images, α-inclusions.