

**SUPRA R-OPEN SOFT SETS AND SUPRA R-CONTINUOUS
(R*-CONTINUOUS) SOFT MAP**

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Abstract: In the paper a new class of generalized supra open soft sets called supra R-open soft sets are introduced and investigated the properties of supra R-open (R-closed) soft sets and supra soft R-interior (closure). The relationships between some generalized supra open soft sets and this class are investigated and illustrated with examples. Also, new types of supra continuous soft maps called supra R-continuous (R*-continuous) soft maps are studied depending on the concept of supra R-open soft sets.

Keywords and Phrases: Soft topological space, supra R-open soft set, supra soft R-interior, supra soft R-closure, supra R-continuous soft map, supra R*-continuous soft map.

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1. Introduction

The classical mathematical approaches are often insufficient for modelling problems with uncertain data. There are several theories such as fuzzy sets, theory of intuitionistic fuzzy sets, theory of vague sets and theory of rough sets which can be considered as tools for dealing with uncertainties. But these theories have their own difficulties due to the inadequacy of the parametrization tool of the theories as pointed out by Molodstov. In 1999, Molodtsov [10] introduced soft set theory as a mathematical tool for solving complex problems dealing with uncertainties.