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SOME MAPPINGS ON SMOOTH FUZZY TOPOLOGICAL AND BITOPOLOGICAL SPACES

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Abstract

Smooth fuzzy topologies are an extension of both, crisp topologies and fuzzy topologies, where not only the sets but also the axiomatic are fuzzified. In this paper, we study some types of smooth functions on smooth fuzzy topological spaces, in the sense of Sostak and Ramadan. The relations among various types of continuity of smooth fuzzy functions on a fuzzy set and at fuzzy point belonging to the fuzzy set are discussed. Further we extend these notions to pairwise smooth mappings between smooth fuzzy bitopological spaces. Also various types of open, closed, continuous mappings are introduced and their interrelations are studied.

Key Words : *Fuzzy topology, Smooth fuzzy topology, Smooth fuzzy bitopology, Pairwise continuous map, Pairwise open map.*

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