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CONTENTS

Abstract: There are various types of generalizations of continuous maps in the development of topology. Recently some decompositions of continuity are obtained by various authors with the help of generalized continuous maps in topological spaces. In this paper we obtain a decomposition of continuity using a generalized continuity called ω-continuity in topology. We also obtain characterizations of ω-continuity in topological spaces.

Abstract: The purpose of this paper is to introduce the notions of $\tilde{g}$-locally closed sets, $\tilde{g}$lc* -sets, $\tilde{g}$lc** -sets in bitopological spaces and some different notions of pairwise LC-continuous functions namely, pairwise $\tilde{G}$LC-continuous functions, pairwise $\tilde{G}$LC* -continuous functions and pairwise $\tilde{G}$LC** -continuous functions. Several examples are provided to illustrate the behaviour of these new classes of sets and functions.

Abstract: In this paper variational finite element approach has been used to investigate temperature distribution in human dermal parts exposed to the atmosphere. The model incorporates variable blood microcirculation, bio-chemical heat generation and other associated activities in three distinct natural layers. The approximate solution is assumed to be quadratic in one dimensional case to ensure the heat flux continuity. The result thus obtained by the FEM can be used for the estimation of thermal injury under extreme climatic conditions.

Abstract: In this paper, we define $\hat{\eta}*$-closed function, pre-$\hat{\eta}*$-closed function quasi-$\hat{\eta}*$-closed function and strongly $\hat{\eta}*$-closed function and obtain the relationships among them. We also study the characterizations of these maps.

Abstract: In the present paper, we have obtained certain results for a Kähler manifold equipped with a semi-symmetric metric connection. Apart from finding the necessary and sufficient condition

for a contravariant almost analytic vector field with respect to Riemannian connection D to be contravariant almost analytic with respect to the semi-symmetric metric connection ∇, we have also shown that Nijenhuis tensor on a Kähler manifold with respect to semi-symmetric metric connection vanishes identically.

Abstract: In the present paper, we introduce and study the notions of b-I-open sets and b-I-continuous functions to obtain a new decomposition of semi-I-continuity. We also investigate some fundamental properties of such functions.

Abstract: The main purpose of this article is to list briefly various topologies on hyperspaces that were discovered from the beginning of the last century to the day before yesterday. Suppose we are given a T_1 topological space (X, T) (respectively a proximity space (X, δ), a uniform space $(X, \mathbb{U})$ or a metric space (X, d)). Suppose $CL(X)$ (respectively $K(X)$) denotes the family of all nonempty closed (respectively compact) subsets of X. Then a natural problem arises: Construct a topology (respectively a proximity, a uniformity or a metric) on $CL(X)$ or $K(X)$ related to the one on the base space X. A natural requirement is to insist that this be done so that the base space X is structurally embedded in $CL(X)$ or $K(X)$ [called ***hyperspaces***] via the map $x \to \{x\}$. Such a study of hyperspaces is not only intrinsically interesting but also is quite valuable in applications to Continua, Function space topologies,

Fractals, Convex Analysis, Geometric Functional Analysis, Differential Equations, Optimization, Game Theory, Mathematical Economics, Theoretical Computing etc. There is a vast literature on this subject. So far no one has succeeded in constructing, directly on the hyperspace, a proximity, which is related to the one on the base space. Proximities are constructed in an indirect way via uniformities. As for the other structures, viz. a metric, a uniformity or a topology, there have been many successful attempts. We list most of these in this article and indicate their salient features. We give a few standard references and the interested reader will be able to get others from them.

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A SURVEY OF NORMAL STRUCTURE 101-141

Abstract: This survey article provides information of the main works, done till recently on normal structure, uniformly normal structure in Banach spaces and metric spaces and asymptotic normal structure in Banach spaces. Several Banach space coefficients have also been considered.

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