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# DECOMPOSITION OF CONTINUITY IN TERMS OF BOTH GENERALIZED TOPOLOGY AND TOPOLOGY

**Pankaj Chettri and Sumiran Basnett**

Department of Mathematics,
Sikkim Manipal Institute of Technology,
Sikkim Manipal University, Rangpoo - 737136, Sikkim, INDIA

E-mail : pankaj.c@smit.smu.edu.in, sumiranbasnett1@gmail.com

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**Abstract:** Here decomposition of continuity like notion is explored in terms of generalized topology as well as topology on a set. This concept is used as a new tool to study different characterizations of a given generalized topological space, giving a new dimension in the study of topological spaces. Firstly, more properties of $\mu^*$-open(closed), $\mu^{'}$-open(closed) sets, $\mu^{'}$-continuous and $\mu^*$-continuous functions are studied. Also, a new family of sets $\mu^*_\alpha$-open(closed) and $\mu^{'}_\beta$-open(closed) sets are introduced. In terms of these sets, the notion of $\mu^*_\alpha$-continuous and $\mu^{'}_\beta$-continuous are defined. Interrelations, characterizations of these sets and functions are explored.

**Keywords and Phrases:** $\mu^{'}$-continuous, $\mu^*$-continuous functions, $\mu^*_\alpha$-open, $\mu^{'}_\beta$-open set, $\mu^*_\alpha$-continuous, $\mu^{'}_\beta$-continuous functions.

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## 1. Introduction and Preliminaries

The notion of generalized topology (in short, GT) was initiated in 2002 by Á. Császár [1]. In 2005, Á. Császár introduced semiopen, preopen, $\alpha$-open, $\beta$-open sets in generalized topological space(GTS) in terms of closure and interior taken with respect to GT [2]. Again in 2015, B. Roy and R. Sen used both topology and GT on a nonempty set $U$ to define a new class of sets in terms of their closure and interior taken with respect to topology and GT in different combinations and