ABSTRACT

In this thesis, the author introduced and studied the concepts of intuitionistic fuzzy centred system, intuitionistic fuzzy centred net and intuitionistic fuzzy centred open filters in intuitionistic fuzzy centred structure space, generalized intuitionistic fuzzy quasi uniform normal space, compactness in intuitionistic bifuzzy generalized structure space, pairwise intuitionistic fuzzy $T_0$ space, pairwise intuitionistic fuzzy $T_1$ space and pairwise intuitionistic fuzzy regular space in completely induced intuitionistic bifuzzy topological space, generalized intuitionistic fuzzy Hausdorff space, generalized intuitionistic fuzzy locally compact space and intuitionistic fuzzy switching map, generalized intuitionistic fuzzy compact open structure space, generalized intuitionistic fuzzy closed set, generalized intuitionistic fuzzy continuous mapping, generalized intuitionistic fuzzy irresolute mapping, strongly intuitionistic fuzzy continuous mapping, perfectly intuitionistic fuzzy continuous mapping, strongly generalized intuitionistic fuzzy continuous mapping, perfectly generalized intuitionistic fuzzy continuous mapping, generalized intuitionistic fuzzy connected spaces, generalized intuitionistic fuzzy compact spaces, generalized intuitionistic fuzzy $T_1$ spaces and generalized intuitionistic fuzzy $T_2$ spaces, generalized intuitionistic fuzzy contra continuous mapping, generalized intuitionistic fuzzy contra irresolute mapping and strongly generalized intuitionistic fuzzy contra continu-
ous mapping, generalized intuitionistic fuzzy regular closed, generalized intuitionistic fuzzy S closed space, strongly intuitionistic fuzzy S closed space, generalized intuitionistic fuzzy almost compact space, and generalized intuitionistic fuzzy $T_1^2$ space. Properties, characterizations and interrelations among the concepts are introduced and discussed. Also, examples and counter examples are provided wherever necessary.