

Research Proposal

Title: On f-Topological spaces

Introduction:

In the context of topology, a filter is a concept related to the study of convergence and neighborhoods in a topological space. Filters are used to define limit points, which are essential in understanding limit and convergence in topological spaces. Filter is a non-empty collection of subsets of topological spaces that contains a filter base and satisfies some additional conditions. This research aims to define a new topology using filters and explore how its varying with existing topology.

Objectives:

- To introduce the notion of global functions using filters.
- To define f-topology using filters and investigate its characterizations.
- To compare the new topology with the existing one.
- To develop new operators and its behavior with f-topology.

Literature Review:

Previous studies have shown that new topologies developed using ideals and plenty of results produced in terms of ideals. This research aims to develop the concept of filters and try to explore new topology and its characterizations.

References:

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- R.Vaidyanathswamy, The localization theory in set topology, Proc. Indian Acad. Sci. Math. Sci.,20(945)51-61.
- I.Zvina, On i-topological space:generalization of the concept of a topological space via ideals, Applied General Topology, (791)(2006) 51-66.