Topology and Its Applications

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Abstract: *Topology, often referred to as "rubber-sheet geometry," studies the properties of space that are preserved under continuous deformations such as stretching and bending but not tearing or gluing. This branch of mathematics has profound implications across various scientific disciplines, including data analysis, physics, and biology. This research paper explores the fundamental concepts of topology and examines its diverse applications. By analyzing key topological principles and their implementation in solving real-world problems, this study aims to highlight the versatility and significance of topology in modern scientific and technological advancements.*

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