"Topological space and continuous reflections"

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ABSTRACT

This article describes the main objects of topology and topological space, the essence of topological reflections, one of the basic concepts of topological space.

Keywords: Topological, Analysis Situs, Geometry And Mathematics, Figure, Space, Polyhedrons, Polynomials.

Many mathematical mathematicians, sometimes with the advent of all mathematical theories, do not find their own taste in the davomi for some time outside mathematics. This is illustrated by the history of complex numbers: these numbers have not been used in other fields for several years, and then they have entered physics and mechanics. Similarly, if we take the geometry science that is the main part of mathematics, the main objects of noevklid (Lobachevsky) geometry in this area— the Lobachevsky Plain and the Phase (Lobachevsky Plain Model) — have also tasted for several decades He didn't find his ini. Another of the most similar fields is Euclid geometry, Lobachevsky geometry, geometry of our time, as well as a section of modern mathematics, a crop of topology.

The Dictionary defines topology as a Greek word meaning "place" and "law." Listing was the first to use the term topology. Topology is one of the relatively "young" and important sections of mathematics. Topology was a result of a review of a number of fundamental facts (concepts) of geometry and mathematical analysis from a general point of view.

Topology first began to be formed in the late 19th century in the work of the great French mathematician Anri Puancare. He calls topology an analysis of "analysis situs". This term, on the other hand, was the first to be brought into mathematics by Riman. Later, the terms bu began to be called *topology* in one word.

Regarding topology, A. Puancare said: **"As far as I'm concerned, the turf paths that came in before me led me towards the analysis situs."** In this context, the famous French mathematician Andre Weale's words about topology deserve to be noted: **"The abstract algebra satan fights the angel of topology over the capture of the heart of a mathematician. Through this, first, the amazing charm and beauty of topology is demonstrated, and second, the extraordinary combination of all modern mathematics is expressed in the leading to topology and algebra."**

In the development of modern science, topology is used in the field of physics, biology, chemistry, and, consequently, geography. Getting into the magical world of topology is a tricky one. Therefore, it is important to carefully master the concepts, definitions, and information of topology. Simple topological concepts begin to appear when we look back at the world around us. It is self-evident that the geometric properties of figures include figure sizes, positioning of the ulare, the appearance of its angles, and so on. Aside from these geometric characteristics, it seems to be overlooking something else. For example, geometric lines are not closed or closed, figures are "hole" or "no holes", are not stretched or stretched, geometric figuras are chained or not, link considering the linking or non-linking of lines , the inability to stretch or tear figures without tearing them, but only beyond euclid geometry will have to come out. As a result of this study and the elements of topology, which study the properties of geometric figures like this, began to enter.

Topology originated from a general point of view by revising the basic concepts of geometry and mathematical analysis. Topology is almost a young but important part of mathematics. Topology can be described as follows: **topology** is a geometric section of mathematics that is considered to be an area that promotes continuity, or studies continuous reflections. Simply put, the inconsistency of function means metric phase and topological phases and their continuous accents. From a geometric point of view, the separation module of two numbers indicates that it consists of the distance between points in the numbers arrow *R*.

In 1906, after French mathematician M. Freshe introduced the concept of a metric phase into the fan, an imbkoni was born to determine the distance between two points in a voluntary natural collection on certain conditions. Reflect *f:* Let's take a prerequisite for inconsistency at some point in X --> *Y*, in which adequate "close" points of the point go to enough "close" points of the image. We express this view from a geometric imagination point of view. The *X* metric is lying at a distance not larger than E > 0 from x0 points of the phase as the X metric phase x0 point (privately R - straight line c circumsphered OE (x0) a set of points.

The inconsistency of the accent at point x0 makes the following view. Optional E > 0 will be found such *b>0* for number $_0$, and *f(x)e Ob f (x0)* will be appropriate for *oe(*$_{x0}$*)* points. This means that *f: X --> Y* reflect is continuous at point x0, $_{x0}$ is the image of points around "dense" enough f (x0) point it means it reflects on the points around the "dense" enough. We should seriously emphasize that metric phases naturally form a topological phase. Topological phases are viewed as natural environments for the existence of continuous accents, based on which a network of topology, known as general topology, has been formed and is developing steadily. Unlike other branches of topology , general geometric topology studies its general and pure topological properties. In a nutshel, multicolumns and polyethylene (hopeful polygons) that differ from differential and divided topology, algebraic and gomotopic topology, based on the application of algebra in topology. It should be noted that in recent times, gomology and gomotopic topology have studied a very important class of general topological phases of topology to determine the boundary between algebraic topology and general topology is causing a certain complexity. Studying the nature of continuous accents, in turn, can lead to the identification of these accents and the study of topological phases , which are areas of value. Among the continuous accents of topological phases are gomeomorphisms, known as topological accents (gomeomorphics). (Matthew 24:14; 28:19, 20) Jehovah's Witnesses would be pleased to discuss these answers with you . For example, if *X* and *Y* are metric phases, *f: X --> the* fact that Y reflecting is gomeomorphism, the shapes and measurements of phase *X* pass through *the Y* phase in the same way, no "disconnect" in phase *X* and if "gluing" no points occurs, the same happens in Phase *Y*.

Topological accents can be used to describe and identify topological invariants. These invariants do not change their characteristics in topological accents . Examples of topological invariants include the concept of the power of the topologic phase, the salinity of topological phases, the formation of one or more parts of the phase, i.e. whether it is connected or unconnected, and the properties of topological boundary (compactness), the "number of measurements" of phases (measurement of the phase). Topology, similar to metrics, affinity, and projective geometries, is often referred to as the department that studies topological invariants of mathematics.

Another important aspect of topology rich in geometric characteristics is the theory of irreversible points. The theory of irreversible points is closely related to the main issues of algebra and mathematical analysis. In algebra and mathematical analysis , we face the question of whether there are solutions to the equation $f(x) = 0(1)$. Here $f(x)$ is equivalent to a multi-layer or other functional equation.

$f(x) + x = x$

If we type $F(x) = f(x) + x$, we will have the equivalent Equation $F(x) = x$ (3). The solutions to this equation are called the irreversible point of F accent. There are meaningful aluminium and proofs of the existence of an irreversible point if you look at this accent in any closed (Euclid phase), of course, in a limited set. Today, topology has become a strong weapon of mathematical research, and its language is of universal importance.

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