

המחלקה למתמטיקה, בן-גוריון

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## לוגיקה, תורת הקבוצות וטופולוגיה

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ביום שלישי, 5 בינואר, 2016

בשעה 12:15 – 13:40

בMath-101

ההרצאה

### **general of category Lusternik-Schnirelmann The spaces metric**

חינתן על-ידי

Negev) the of University (Ben-Gurion Srinivasan Tulsi

**תקציר:** The Lusternik-Schnirelmann category (LS-category) of a topological space is a measure of how far the space is from being contractible. It is defined as the minimum number of open sets needed to cover the space such that each set is contractible in the space. This concept has been studied historically in the context of algebraic topology and has applications in various areas of mathematics, including differential geometry and the theory of manifolds. The LS-category of a space is closely related to its homotopy type and provides a way to compare the complexity of different spaces. In this talk, we will discuss the general theory of LS-category, including the upper and lower bounds for various classes of spaces. We will also explore some recent developments in the field, such as the work of Dranishnikov and Whitehead on the LS-category of manifolds, and the work of Bockstein and Menger on the LS-category of compacta. Finally, we will discuss the applications of LS-category to the study of group actions and the geometry of spaces.