**Title -** Topological Data Analysis: Insights from the Shape of Data

**Abstract –** “What is the shape of your data?” What may have been regarded as a peculiar question only a few years ago, today is being frequently asked and answered, with powerful results. Topological Data Analysis (TDA), a growing collection of data analysis methods rooted in the mathematical discipline algebraic topology, is empowering researchers and analysts to extract discriminating geometric features from their data. This talk will serve as an introduction to TDA machinery and some of the new methods that increase the value of TDA to existing machine learning paradigms. Through examples, this talk will show how meaningful conclusions can be made by accessing latent geometric structure in complex, often high-dimensional data.