Topological Data Analysis of Spatial Systems

11:30 Friday Oct 23

https://njit.webex.com/njit/j.php?MTID=m626b3c41d51cb46178864e7cddbd6120

Abstract

From the venation patterns of leaves to spider webs, roads in cities, and social networks, the structure of many systems are influenced significantly by space. Accordingly, the analysis of the effects of space on structure and function is an active area in the study of networks and other complex systems. In this talk, I'll give an introduction to spatial networks, topological data analysis (TDA), and the application of TDA to spatial complex systems. I'll discuss examples from voting in elections, city street networks, and spiders spinning webs under the influence of various drugs.

Speaker

Mason Porter

Professor
Mathematics
UCLA