

Thursday, November 7, 2019  
4:30–5:20 pm / SAS 2102

# The Topology of Data

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The 21st century has seen a boom in the production of data as well as methods to analyze data. One such methodology is Topological data analysis (TDA), where concepts from topology are used to infer the patterns underlying data sets. I will provide a basic and accessible introduction to persistent homology, a common type of TDA that is used to count holes in a dataset. I will further demonstrate how persistent homology can be used to summarize a mathematical model describing flocks and swarms that arise in biological applications. No prior background in the area will be assumed and this talk should be accessible to all undergraduates.

NCSU Society for Undergraduate Mathematics

## SUM Series

Mathematics and pizza!