



COLLOQUIUM

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**Discrete Morse Theory and Topological Complexity of
Unordered Graph Configuration Spaces**

Friday October 18th at 3pm in RT 1516

Bio: Dr. Steve Scheirer received his PhD from Lehigh University in 2018. He is currently a Visiting Assistant Professor at Ashland University. His main research interest is topology, and, more specifically, topological complexity.

Abstract: The topological complexity of a space X , denoted by $TC(X)$, is related to the problem of motion planning within the space X . More specifically, $TC(X)$ can be viewed as the minimum number of "continuous rules" that are required to describe how to move between any two points in X . In this talk, we will be interested in the topological complexity of unordered graph configuration spaces. We will discuss an approach to studying these spaces using discrete Morse theory and use this approach to determine the topological complexity for certain classes of graphs.

Refreshments at 2:30pm in RT 1517