

Local and global structure of graphs

Tara Abrishami

16 November 2025

“Local” and “global” are terms commonly used to describe various structures or properties of graphs. For example, intuitively speaking, a clique is local, whereas a long cycle is global. In this talk, I will discuss a way of formalizing the boundary between local and global structure in graphs. Using this framework, we can ask: when is a graph property a local property or a global property? I will also discuss implications of a local-global framework and connections to other areas of study.