

Graphs, their closure structures, and a weak homotopy equivalence with their clique complex

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The graphs have a Čech closure structure on their vertices that reflects information about the graph structure. In this talk, we will discuss the relationship between this structure and the geometric realization of the Vietoris-Rips complex of the graph. In particular, we will show that these two spaces possess the same weak homotopy type, motivating the in-depth study of tools to compute homotopy in closure spaces and pseudotopological spaces.

In Special Session 6 on Discrete Homotopy Theory at the Mathematical Congress of the Americas 2025.