STRUCTURAL CLUSTERING IN UNCERTAIN GRAPHS

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ABSTRACT:
Clustering uncertain graphs based on probabilistic graph structures has sparked extensive research interest and widely varying applications. The existing structural clustering solution, however, relies heavily on the computation of reliable structural similarity for node pairs, which is costly in large uncertain graphs. In this talk, we present a new, decomposition-based method, DUSCAN, for efficient reliable structural similarity computation with theoretically improved complexity. We further design a cost-effective index structure UCNO-Index, and a series of powerful pruning strategies to expedite structural clustering in uncertain graphs. The effectiveness of our proposed solutions is discussed via experimental studies on real-world uncertain graphs.