CoreAlign: Core-based Global Alignment for Protein-Protein Interaction Networks

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Abstract

Biological network alignment aims to find similar functional and topological regions to guide the transfer of biological knowledge of cellular functioning from known, well-studied species to unknown ones. The proposed aligner (CoreAlign) relays on the structural of the Protein-Protein Interactions (PPI) network by using network decomposition of what is called shells or internal network cores. The proposed aligner searches the space of each core to build the Alignment. CoreAlign has been compared with many aligners and it has competitive results among these aligners in either topological or biological measures.

References


Index Terms

Computer Science  Applied Sciences

Keywords

Protein-protein interactions, PPI, network alignment, protein function, network decomposition.