

Extract K-Core

Description

Extract the k'th k-core from a graph as a separate graph. The k-th k-core is what remains of the graph after every node with fewer than k edges connected to it is removed from the graph recursively.

Parameters

k – the k-core to extract

Applications

This can be useful in the exploration of a graph to help understand the graph's structure, often visualizing the extracted k-core.

Usage Hints

As a k-core might break one component into two or more, it can be useful to extract the weak components on the result if that occurs in order to inspect each more closely.

References

B. Bollobas, The evolution of sparse graphs, in Graph Theory and Combinatorics, Proc. Cambridge Combinatorial Conf. in honor of Paul Erdos, Academic Press, 1984, 35-57. (References: [ALGDOC:1], [ALGDOC:2])

S. B. Seidman, Network structure and minimum degree, Social Networks 5:269-287.

Size and Connectivity of the k-core of a Random Graph. ?uczak, Tomasz.

Generalized Cores. V. Batagelj, M. Zaversnik.

k-Core Organization of Complex Networks. Dorogovtsev, Goltsev, Mendes

See Also



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