International Workshop on Symmetries of Graph and Networks

Nowadays, graph symmetries are becoming a very important and rapidly growing area of study, and often looked at closely by computer scientists and other network designers. One significant instance of this is the study of interconnection networks. These are usually represented by an undirected graph, in which vertices represent processors and edges represent links between processors. To achieve high performance, mathematicians and computer scientists recommend graphs with high levels of symmetry as models for interconnection networks, because of the many advantages that they exhibit. Networks modelled on vertex-transitive graphs (especially Cayley graphs) have been shown to be very "good" in their balance of cost (measured by the degree of each vertex in the network) against performance (how easy they are to disconnect, and the efficiency of algorithms run on them). The symmetry of these graphs often makes them relatively easy to study and understand, and has the huge advantage that "local" algorithms work globally, because vertex-transitivity implies that all vertices hold equivalent roles within the global network.

The goal of this workshop would be to provide an excellent forum for leading experts in the area of symmetries in graphs and networks to share recent developments and techniques among themselves, to develop further collaborations, and to provide an opportunity for younger, up-and- coming researchers to meet and learn from established authorities in the subject area.

Organizers

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