Constructing Cayley graphs for efficient data transmission

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Abstract

It is well known that Cayley graphs play an important role in the design of interconnection networks due to many attractive properties they exhibit. In fact, a number of networks of both theoretical and practical importance are Cayley graphs. In the past more than two decades researchers proposed many families of Cayley graphs as models for interconnection networks. I will talk about some efforts in recent years towards constructing Cayley graphs that are efficient for data transmission measured by transmission time, broadcasting time and/or edge-congestion.