

Generalized 4-Connectivity of Alternating Group Networks

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Connectivity is a desirable attribute for the structure of an interconnection network. A natural generalization of the connectivity is the generalized connectivity introduced by Hager in 1985. In this paper we determine the generalized 4-connectivity of the alternating group network. We prove that for an arbitrary set of four vertices, there exist $n - 2$ trees in AN_n having in common exactly these four vertices. We also deduce the value of the generalized 4-edge-connectivity of AN_n .

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