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Super edge- and point-connectivities of the Cartesian product of regular graphs. (English)

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The author proves that the Cartesian product of two regular graphs with maximum edge-connectivity (i.e., $\lambda(G) = d(G)$) is super edge-connected except for the case $K_2 \times K_n$, $n \geq 2$. Here super edge-connected means $\lambda(G) = d(G)$ and each minimum edge-disconnectivity set isolates a vertex. Using this result (and a similar one about maximum vertex-connectivity) certain classes of networks which are recursively defined by Cartesian products are shown to possess super edge-connectivity (respectively, super vertex-connectivity).

Reviewer: M.Hager (Leonberg)

MSC:

05C40 Connectivity

Cited in 1 Review
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