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Optimal topologies for maximizing network transmission capacity

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Highlights:

1 A link rewiring approach for generating optimal network topologies to maximize network transmission capacity is proposed.

2 An optimal network for traffic transmission is more likely to have a core-periphery structure while assortative mixing and the rich-club phenomenon may have negative impacts on network performance.

3 Based on the observations of the optimized networks, an efficient method to improve the transmission capacity of large-scale networks is proposed.

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