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Edge-based epidemic spreading in degree-correlated complex networks

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**Highlights**

- Two growing network models acquire degree-degree correlations are proposed.
- An edge-based SIR epidemic model on degree-correlated networks is formulated.
- The basic reproduction number and final epidemic size are theoretically derived.
- Rate equations to compute the two node degree correlations are formulated.
- Our model is also tested on degree-correlated networks with clustering.

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