Recruitment dynamics in adaptive social networks MAXIM
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Naval Research Lab — We model recruitment in social networks in the presence of
birth and death processes. The recruitment is characterized by nodes changing their
status to that of the recruiting class as a result of contact with recruiting nodes.
The recruiting nodes may adapt their connections in order to improve recruitment
capabilities, thus changing the network structure. We develop a mean-field theory
describing the system dynamics. Using mean-field theory we characterize the depend-
dence of the growth threshold of the recruiting class on the adaptation parameter.
Furthermore, we investigate the effect of adaptation on the recruitment dynamics,
as well as on network topology. The theoretical predictions are confirmed by the
direct simulations of the full system.

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