

Abstract Submitted  
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**Recruitment dynamics in adaptive social networks** MAXIM SHKARAYEV, LEAH SHAW, College of William and Mary, IRA SCHWARTZ, 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 dependence 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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