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# Temporal Exponential Random Graph Models (TERGM)

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## Abstract

This workshop will provide an introduction to the estimation and simulation of dynamic networks using TERGMs in statnet. We will cover the statistical theory and methods for separable temporal ERGM modeling, with a hands-on tutorial using the TERGM software package. TERGM can be used for both estimation from and simulation of dynamic network data, and it provides a wide range of fitting diagnostics.

The topics covered will include estimation from network panel data, from a single cross-sectional network with link duration information, and from cross-sectional, egocentrically sampled network data. Simulating dynamic networks with both fixed and changing node sets will also be covered. We will demonstrate how the results of a dynamic network simulation can be visualized as an animated "network movie" using the ndTV package in statnet. An example of the type of "network movie" these tools can produce can be found at [statnet.org/movies](http://statnet.org/movies).

Prerequisites: This workshop will assume familiarity with R, and the network, SNA and ergm packages in statnet. The "Exponential-family Random Graph Modeling (ERGMs) with statnet" workshop is recommended as preparation.

**Keywords:** TERGM, Statnet

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