# Bayesian exponential random graph models for social networks

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Vortrag im Rahmen des Institutskolloquiums
**14. März 2013, 17:15 Uhr**
**Seminarraum,** Ludwigstraße 33 I

Exponential random graph models (ERGMs) are a class of widely used exponential family models for social networks. The topological structure of an observed network is modeled by the relative prevalence of a set network statistics which are regarded as random variables. The posterior distribution of Bayesian ERGMs is doubly intractable since computation of the likelihood is not available and the evidence or marginal likelihood of the posterior is, as usual, also intractable. We present a fully Bayesian framework for the analysis of this family of models and some modeling extensions.