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Research Article

Modeling the dynamics of social networks using Bayesian hierarchical blockmodels

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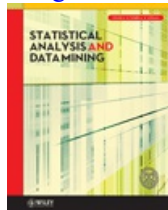
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Abstract

We introduce a new class of dynamic models for networks that extends stochastic blockmodels to settings where the interactions between a group of actors are observed at multiple points in time. Our goal is to identify structural changes in model features such as differential attachment, homophily by attributes, transitivity, and clustering as the network evolves. Our focus is on Bayesian inference, so the models are constructed hierarchically by combining different classes of Bayesian nonparametric priors. The methods are illustrated through a simulation study and two real data sets. © 2011 Wiley Periodicals, Inc. *Statistical Analysis and Data Mining* 5: 218–234, 2012

Citing Literature



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