



03.03.2011

Einladung

Am Dienstag, dem 29. März 2011, Hörsaal M5, 16:30 Uhr

spricht

Steffen Dereich, Marburg

Random networks with concave preferential

Zusammenfassung:

A preferential attachment model is a random dynamical network model in which at every construction step a new vertex is introduced and attached to every existing vertex independently with a probability proportional to a concave function f of its current degree.

I review recent progress in the analysis of these networks with a focus on clustering (I) and connectivity (II) properties. In (I) we relate features of the largest component to properties of a (truncated) multi-type branching random walk. In particular, we give an analytic criterion for the emergence of a giant component, which is both necessary and sufficient, and which becomes explicit when f is linear. Additionally, we characterise the networks for which the critical percolation parameter is zero (the robust regime) and for which it is not.

In (II) we analyse typical distances in the ultra small regime. Interestingly, the connectivity structure of preferential attachment graphs is found to differ significantly from that of other network models such as the configuration model.

Auf diesen Vortrag wird besonders hingewiesen

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