Spatial models for virtual networks

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Abstract

In an attempt to explain the link structure of complex networks such as web graphs, on-line social networks, or citation graphs, increasing emphasis is being placed on spatial graph models. In a spatial graph model, nodes are embedded in a metric space, and link formation depends on the relative position of nodes in the space. Spatial models form a good basis for link mining: assuming a spatial model, the link information can be used to infer the spatial position of the nodes, and this information can then be used for clustering and recognition of node similarity. I will discuss recent results on spatial graph models, including joint work with Anthony Bonato and Pawel Prałat.