Clustering coefficient in Spatial Preferential Attachment model.

L. Iskhakov, M. Mironov, L. Ostroumova Prokhorenkova,

Advanced Combinatorics and Network Applications Lab, Moscow Institute of Physics and Technology, Moscow, Russia

P. Prałat,

Department of Mathematics, Ryerson University, Toronto, ON, Canada

We study the clustering properties of the *Spatial Preferential Attachment* (SPA) model, which naturally combines geometry and preferential attachment. It was previously shown that SPA model has a lot in common with observed real-world networks, e.g., it has power-law degree distribution, small diameter, etc.

We consider local clustering coefficient as a function of node degree, which for every d is the average local clustering coefficient among all nodes with degree d. We show that, similarly to many real-world networks, this coefficient behaves asymptotically as d^{-1} .