

1139-53-565

Jason Cantarella*, Boyd Graduate Research Center, Athens, GA 30606, and **Clayton Shonkwiler**. *Sampling and theory for random embedded spatial graphs, with applications to topologically complex polymers*. Preliminary report.

While many biopolymers and lab-created polymers are either linear or ring (circular) polymers, there are now many polymers with more complicated topologies, ranging from theta-curves and multitheta curves to much more complicated topologies such as the random networks found in collagen and other elastic materials such as rubber. However, the theory of random embedded spatial graphs is certainly not as well developed for these topological types as it is for linear and ring polymers.

Uehara has recently presented theoretical and sampling results on random spatial graphs with the topology of a multitheta curve. Here, we give some preliminary results on a generalization of her methods to arbitrary topologies which cover both sampling and (some) theory. (Received February 19, 2018)