1138-92-50   **Esaias J Janse van Rensburg*** (`rensburg@yorku.ca`), Mathematics & Statistics, York University, Toronto, Ontario M3J 1P3, Canada. *Mean Field Analysis of Algorithms for Scale-Free Networks in Molecular Biology.*

Scale free networks in Molecular Biology are normally grown by recursive algorithms which add and delete nodes and bonds. Examples are the Barabasi-Albert algorithm, the Duplication-Divergence algorithm, the Solé algorithm and the iSite algorithm. In this talk a mean field approach to the analysis of these algorithms is presented. I will in particular focus on the iSite algorithm, and give mean field values of the scaling exponent of the degree distribution. I will also describe some variations on the algorithm, and estimate the scaling exponent numerically. (Received January 24, 2018)

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