

Coalescence and Minimal Spanning Trees of Asymmetric Bipartite Graph.

A. Iambartsev¹, **Y. Kovchegov**², **P.T.Otto**³

¹ University of São Paulo, IME-USP

² Oregon State University

³ Willamette University

Here we devise a method of finding the limiting mean length of a minimal spanning tree for a random graph via the Smoluchowski coagulation equations for the corresponding coalescent process. In particular, we use this approach for finding the limiting mean length of a minimal spanning tree for the Erdos-Renyi random graph on an asymmetric bipartite graph, producing a completely new formula yet consistent with the previously known formula for the symmetric bipartite graph. Arxiv:1702.07764. Work was supported FAPESP 2016/19286-0.