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**Weronika J Buczynska\*** ([nisiabu@math.tamu.edu](mailto:nisiabu@math.tamu.edu)). *Toric models of graphs.*

The binary symmetric Markov statistical model of evolution on a trivalent tree is a projective toric variety, naturally defined in terms of the semigroup of networks of paths on the tree. This semigroup may be defined for any trivalent graph, and we call the associated toric variety the toric model of that graph. I will explain this background, establish the basic properties of the models and present our main result, that models of graphs with the same numbers of leaves and cycles are deformation equivalent. (Received August 24, 2009)