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PANPAN ZHANG* (panpan.zhang@uconn.edu) and **DIPAK DEY**. *The degree distribution and Gini index of random caterpillar trees.*

We consider two classes of random caterpillar trees (RCTs) which evolve in different manners: uniform and nonuniform. Particularly for the nonuniform class, we look into the RCTs growing in the fashion of preferential attachment. We determine both the exact and asymptotic joint distributions of the degrees of the vertices on the central path (of the RCTs) for both classes. We also propose a topological index, based on the Gini index, as a measure of disparity of the evolutionary processes of the two classes of RCTs. (Received August 04, 2017)