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**Zhiyun Cheng, Sujoy Mukherjee\*** (sujoymukherjee@gwu.edu), **Józef H. Przytycki, Xiao Wang** and **Seung Yeop Yang**. *From Gaussian polynomials to plucking polynomials.*

The plucking polynomial is an invariant of rooted trees with connections to knot theory. It can be defined in terms of products of Gaussian polynomials ( $q$ -binomial coefficients). We will discuss whether or not every product of Gaussian polynomials is realizable as a plucking polynomial of a rooted tree and discuss criteria determining this. Further, we will discuss uniqueness of the realization when it exists. (Received February 12, 2016)