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**Stephen R Curran\*** ([curransr@math.ucla.edu](mailto:curransr@math.ucla.edu)), Dept. of Mathematics, UCLA, 520 Portola Plaza, Los Angeles, CA 90095. *Free probability and planar algebras.*

In 2008, Guionnet, Jones and Shlyakhtenko gave a diagrammatic construction of a subfactor, starting from a planar algebra, by considering a natural random matrix model on the associated principal graph. In recent work with Jones and Shlyakhtenko, we have given a diagrammatic construction of Popa's symmetric enveloping algebra associated to these subfactors, and computed several related invariants. We will survey some of these developments. (Received September 24, 2012)