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Brian Rider* (brian.rider@temple.edu). *On continuum limits of random matrices.*

In the last few years, several important distributions from random matrix theory have been characterized in terms of random differential equations. A guiding principle is that the large dimensional limit of certain random matrix ensembles can (and should) be viewed as the continuum limit of the underlying discrete operators. An advantage of the method is that it applies simultaneously well to the so-called "beta ensembles", one parameter families of models which generalize the classical real symmetric, complex Hermitian, and quaternion self-dual Gaussian matrices.

I will attempt summarize the current state of affairs, and then point out various directions for future research. (Received January 17, 2014)