Finite free probability

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The connection between free probability and random matrices is well known: large random matrices in general position are asymptotically free. In this talk we will explain the recent theory of finite free convolution introduced by Marcus, Spielman and Srivastava and its conexion with random matrices. We will then describe the theory of cumulants for this convolution developed in joint work with Daniel Perales and give recent results on Berry-Essen theorem, infinite divisibility and appearance of spikes for this convolution.