1027-60-182 **Ioana Dumitriu*** (dumitriu@math.washington.edu), University of Washington, Department of Mathematics, BOX 354350, Seattle, WA 98195. *Beta ensembles: from old results (semicircle laws) to new (stochastic operators).*

The study of β-ensmbles is one of the more recent direction in random matrix theory, which generalizes the study of "classical" Gaussian, Wishart, and MANOVA ensembles corresponding to values of a parameter $\beta = 1, 2, 4$, (as the matrix entries are real, complex, or quaternion) by introducing "interpolating" ensembles corresponding to any positive real β. Since the introduction of matrix models for the β-ensembles in 2001, there has been considerable progress in the study of eigenvalues statistics of these β-ensembles; the most recent and perhaps most striking of which is a connection to stochastic operators, which was observed by Edelman and Sutton in 2004, and rigorously proved by Ramirez, Rider, and Virag, in 2006.

This talk is a survey of some of the recent developments in the study of β-ensembles, and it will include a discussion of issues and open problems. (Received February 26, 2007)