1030-05-13   **Robin Pemantle*** (`pemantle@math.upenn.edu`), Department of Mathematics, 209 South 33rd
                    Street, Philadelphia, PA 19104. *Effective methods in multivariate asymptotics.* Preliminary report.

A number of studies have used complex contour methods to extract asymptotics for multivariate generating functions. These date back to the 1983 work of Bender and Richmond, with more recent contributions from J. (Z.) Gao, Campbell, H.-K. Hwang, Wormald, Pittel, Pemantle, Wilson, Lladser, Bressler, and others. Current work of the presenter, joint with Mark Ward (Purdue) and several graduate students, involves piecing together these methods in order to obtain fully automated asymptotic analyses. This lecture concerns the state of the art for bivariate generating functions. (Received June 06, 2007)