1030-52-104 **Tsung-Lin Lee** (leetsung@msu.edu), Michigan State University, Department of Mathematics, East Lansing, MI 48824-1027, and **T.Y. Li\*** (li@math.msu.edu), Michigan State University, Department of Mathematics, East Lansing, MI 48824-1027. *The mixed volume computation, A revisit.* 

While the mixed volume computation generates general interests of its own, its by-product the *mixed cells* are crucially important in solving polynomial systems numerically by the polynomial homotopy continuation methods. In 2005, a software package, **MixedVol** by T. Gao, T.Y. Li and M. Wu, emerged which led the existing codes for this purpose by a great margin. However, after **MixedVol** was published, T. Mizutani, A. Takeda and M. Kojima developed a more advanced algorithm based on dynamic evaluations of the mixed cells which leads **MixedVol** in speed by a substantial margin. Recently, we revised the method in **MixedVol** with different forms of dynamic evaluations implemented. The preliminary results show that the new **MixedVol** code overtakes the lead in speed once again. (Received July 24, 2007)