1051-05-29 **Fabio Rapallo**, Universita' del Piemonte Orientale, viale Teresa Michel, 11, 15121 ALESSANDRIA, ALESSANDRIA, Italy, and **Ruriko Yoshida*** (ruriko.yoshida@uky.edu), 805A Patterson Office Tower, Lexington, KY 40506. *Markov bases and subbases for bounded contingency tables.*

In this talk we study the computation of Markov bases for contingency tables whose cell entries have an upper bound. In general a Markov basis for unbounded contingency table under a certain model differs from a Markov basis for bounded tables. Rapallo, (2007) applied Lawrence lifting to compute a Markov basis for contingency tables whose cell entries are bounded. However, in the process, one has to compute the universal Gröbner basis of the ideal associated with the design matrix for a model which is, in general, larger than any reduced Gröbner basis. Thus, this is also infeasible in small- and medium-sized problems. In this talk we focus on bounded two-way contingency tables under independence model and show that if these bounds on cells are positive, i.e., they are not structural zeros, the set of basic moves of all 2×2 minors connects all tables with given margins. We end this talk with an open problem that if we know the given margins are positive, we want to find the necessary and sufficient condition on the set of structural zeros so that the set of basic moves of all 2×2 minors connects all incomplete contingency tables with given margins. (Received July 24, 2009)