

1086-VG-1589 **Delong Meng*** (delong13@mit.edu), 290 Massachusetts Ave, Cambridge, MA 02139. *Top Trading Cycle with Random Student Preferences.*

The top trading cycle is a mechanism used in many school districts to assign students to public schools. The mechanism has many desired properties such as Pareto-efficiency and strategy-proof-ness, but for practical application one major problem is to determine the most fair way to assign each student a lottery number. Previous research have shown that certain classes of lottery systems are equivalent in some special cases. In this talk I will present an equivalence theorem for the general case, i.e., when schools have arbitrary priority groups over students. In particular I will show that under stochastically generated student preferences all lottery systems yield the same social welfare. I will also compare my theoretical result with data from the 2008 Boston Public School Match and discuss some possible limitations of my model. (Received September 23, 2012)