

1023-05-1183 **Rachel Esselstein*** (rachel.esselstein@dartmouth.edu), 6188 Kemeny Hall, Hanover, NH
03755. *Local Properties of Colored Trees.*

Ehrenfeucht-Fraïssé games are used in logic to measure the logical complexity of a property. A winning strategy for the second player usually indicates that a property is not expressible in a particular logic. In this talk, I will introduce new means for determining whether the second player has a winning strategy. This method can be used to give a slick proof of Fagin, Stockmeyer and Vardi's result that Graph Connectivity is not expressible in Monadic NP (a subclass of NP). Finally, I will discuss ways to extend this method to tilings of trees. (Received September 25, 2006)