

# COLLOQUIUM



**Western Illinois University  
Department of Mathematics**

**Thursday, November 3<sup>rd</sup>, 2005  
4:00 pm  
MG 324**

## **“The Mathematics of Poker: Odds, Outs and Oscillations”**

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ABSTRACT: Over the past three years, poker has enjoyed a dramatic surge in popularity. Each day tens of thousands of people play poker at home, in casinos and on the internet. Yet few players are aware of the mathematical theory that lies behind winning strategies. In particular, many fail to see poker for what it is: a long term game. In this talk we will review the basic concepts of probability, including counting techniques, odds and expected value. We will then apply these concepts to the game of Texas Hold'em. After reviewing the rules of the game, we will see how pot odds, implied odds and position affect how one plays his cards. In particular, we will see how to analyze starting hands. I will also mention an alternative way to look at variance and “bad beats”.

**REFRESHMENTS WILL BE SERVED AT 3:45 PM IN MG 324**