

**Undergraduate Math Club
Winter 2006
2nd floor Nesbitt Common Room
Jan. 12, 4:10-5:00pm
(free pizza and pop, as always)**

Random Fibonacci sequences

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Abstract

The numbers of the Fibonacci sequence 1, 1, 2, 3, 5, 8, ... increase exponentially at a rate equal to the golden ratio 1.618.... Random Fibonacci sequences are obtained by taking the next number in the sequence to be either the sum or the difference of the last two numbers with equal probability. Will the numbers in a random Fibonacci sequence also increase exponentially? This talk will answer this question by introducing concepts such as the ergodic theorem and martingales from an elementary standpoint.