Mahidol University International College

MUIC Mathematics Seminar

Speaker: Michael A. Allen (Physics Department, Mahidol University)

Title: *Combinatorial proof of Fibonacci number identities using fence tilings*

Abstract

A (w, g)-fence tile consists of two pieces of width w (and unit height) separated by a gap of width g. We consider tilings of an n-board (a linear array of n square cells of unit width) using squares, half-squares, and fence tiles with w and g equalling 1 or 1/2 to arrive at combinatorial proofs of various identities relating to Fibonacci numbers and their generalizations.