

1116-05-1709 **Viorel Nitica*** (vnitica@wcupa.edu), Department of Mathematics, West Chester University,
West Chester, PA 19383. *Tilings by ribbon L n-ominoes, n odd.* Preliminary report.

Recently there has been some progress in solving tilings problems by ribbon L n-ominoes, n even. Two papers of interest are M. Chao, D. Levenstein, V. Nitica, R. Sharp, A coloring invariant for ribbon L-tetrominoes, *Discrete Mathematics*, 313 (2013) 611-621 and V. Nitica, Every tiling of the first quadrant by ribbon L n-ominoes follows the rectangular pattern. *Open Journal of Discrete Mathematics*, 5, (2015) 11-25. The main observation is that any tiling of the first quadrant reduces to one by rectangles. This property does not hold for n odd.

We will discuss in the talk tiling problems by ribbon L n-ominoes, n odd. New techniques are developed, based on nonlinear algebra. (Received September 21, 2015)