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**Arthur L Gershon\*** ([arthur.gershon@case.edu](mailto:arthur.gershon@case.edu)). *A Path Through the StArrs: Using the Transfer Matrix Method to Compute Generating Functions for Strip Arrangements on Chessboards*. Preliminary report.

For positive integers  $m$  and  $n$ , let  $T(m, n)$  be the number of ways to arrange strips on an  $m \times n$  chessboard with at most one horizontal strip in each row and at most one vertical strip in each column. We show how to use the transfer matrix method to compute, for a fixed positive integer  $m$ , the generating function for the sequence  $\{T(m, n) : n \geq 0\}$ . This technique can be generalized to strip arrangements that allow up to  $h$  horizontal strips in a row and  $k$  strips in a column; the case  $h = k = 1$  that we will focus on is of interest due to an apparent connection with the eight-vertex model of statistical physics. Time permitting, we will also discuss results for strip arrangements that allow any number of strips in each row and column (i.e., the case  $h = k = \infty$ ). (Received September 26, 2017)