Enumerating tilings of a strip using tetrominoes

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Given a set of tiles and a region we can determine the number of ways to tile that region with the tiles (i.e., cover with no overlaps). In this talk we will give a method to count the number of tilings of a rectangular strip with fixed height using tetrominoes (i.e., Tetris pieces) using some simple graph theory and matrix multiplication. We also will give several other examples of this technique.

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