1145-05-2059　　　　**Katie Haymaker*** (`kathryn.haymaker@villanova.edu`). *Counting restricted tilings of rectangular arrays and applications.*

How many ways are there to tile a rectangular board with a variety of tiles? In this talk we will derive a recursive formula for the number of tilings of a $2 \times n$ board with squares, dominoes, and I-trominoes, along with a formula for the $3 \times n$ board tiled with squares and dominoes. We will then consider restricted tilings of an $m \times n$ board and discuss applications to a particular problem in coding theory. (Received September 24, 2018)