

# Math Talks Seminar Series

## Notes on Counting a Variety of Integer Sequences

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### Abstract

Throughout the course of this work, we will participate in a brief discussion of a problem involving the number of ways an integer sequence of length  $n^2$  can contain all the ordered pairs in the set  $[n] \times [n]$  subject to certain constraints. The number of such sequences has been presented in the case that  $n = 3$  as Problem 2050 in the MAA Mathematics Magazine. This work is dedicated to providing a general solution for every  $n \geq 1$  by connecting these sequences to graphs and making use of some beautiful results in spectral graph theory.



**Friday March 6, 2020**

**2:00 to 3:00 pm**

**D 107**

**Coffee and refreshments will  
be provided.**