## 1154-VS-2363 Eugene Fiorini (eugenefiorini@muhlenberg.edu) and Froylan Maldonado\* (froylan.mal@gmail.com), 4972 Bunnell Street, San Diego, CA 92113, and Sabrina Traver, Peterson Lenard and Tony W. H. Wong (wong@kutztown.edu). On Some Properties of Latin Square Determinants.

A Latin square is an  $n \times n$  matrix in which the symbols  $\{1, 2, ..., n\}$  appear in each row and column of the matrix without repetition. An isotopic Latin square is a Latin square whose first row and first column are comprised of the symbols  $\{1, 2, ..., n\}$  in order. Two Latin squares are in the same isotopic class if one can be transformed into the other by a series of row, symbol, and column permutations. In this talk, we discuss the determinants of various  $n \times n$  Latin squares, the correlation between isotopic classes and those determinants, and several integer sequences associated with those isotopic classes. (Received September 17, 2019)