

SWINGSET: A TOOL FOR VISUALIZING LINEAR ALGEBRA VIA THE CARD GAME SET[©]

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SET[©] is an award-winning card game which is both easily learned and laden with numerous connections to various branches of mathematics. In this talk, we will discuss in particular its links to elementary linear algebra and finite geometry and illustrate this theory via the program *Swingset*, which the author co-wrote with Tim Mills under the advisorship of Professor Ben Coleman (Moravian College) as part of an undergraduate research program.

The material within this talk should be readily accessible, as it only presupposes a knowledge of (basic) linear algebra. Previous exposure to homogeneous coordinates and affine transformations is helpful, but by no means necessary. (*Swingset* itself is intended for classroom use in a first-semester linear algebra course.)