## ON THE UNIQUE SOLVABILITY OF A GRID-BASED PUZZLE

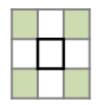
Undergraduate Math Club CORNELL UNIVERSITY

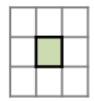












**SPEAKER**Katie Borg

## **ABSTRACT**

Think-Tac-Toe is a grid-based logic puzzle, the goal of which is to determine the location of Xs and Os in a gird given a clue grid of the same size and shape filled with numbers. A puzzle is considered solvable if a given clue grid corresponds to a unique configuration of Xs and Os. Using a combination of linear algebra, graph theory, and observation, we will explore the solvability patterns and prove them for specific grid types.

MAR 13 at 4:45pm

Malott 532 \* Refreshments