1067-Z1-2143   **Alexander A Azzam*** (adamazzam@gmail.com), Lincoln, NE , and **Gizem Karaali**
(gizem.karaali@pomona.edu), Claremont, CA. *Game Theory and School Choice.*

In graph theory, the stable matching problem is the problem of finding a stable matching in a bipartite graph. In this talk we examine a close variant of the stable matching problem known at the school choice problem. The school choice problem concerns the design and implementation of matching mechanisms that produce school assignments for students within a given public school district. Since school assignments are made given reported student preferences, this often incentivizes strategic reporting rather than truthful reporting. We then treat this variant of a classic problem as a cooperative private information game, and examine this problem from the perspective of game theory. We outline a coalitional strategy for the Gale-Shapley student optimal stable mechanism. If time permits, we will outline an adaptation of a well-known combinatorial optimization algorithm to the school choice problem, and discuss its relevant social interpretation and impact.

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