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The Power Index Game

The power index game models a political committee in which a bill is proposed and party members vouch to pass or reject the bill. In more general terms, this game models the effect your acquaintances have on your decisions. We use a connected graph to model a group of committee members, where vertices represent members and edges represent relationships among members. The game takes place in rounds where in each round, members keep or change their decision on passing the bill based on the influence of their local neighbourhood. The main result of the talk will focus on finding well known discrete structures within the model and using them to construct cycles in the game.

This is joint work with Dr. Richard Nowakowski and Dr. Christopher Duffy.