1145-05-2517   **Brant Jones*** (`jones3bc@jmu.edu`). *Avoiding Patterns and Making the Best Choice.*

The game of best choice (also known as the secretary problem) has been studied since at least the 1950's and was widely popularized in a 1960 column of Martin Gardner. In the classical setup, a player conducts "interviews" with a fixed number of "candidates." After each interview, the player ranks the current candidate against all of the candidates that have been considered so far (without ties). The player must then decide whether to accept the current candidate and end the game or, alternatively, whether to reject the current candidate forever and continue playing in the hope of obtaining a better candidate in the future. In this talk, we use enumerative combinatorics to investigate variations where permutation pattern-avoidance is used to restrict the interview orderings that can occur and to describe strategies that maximize the chance of hiring the best candidate. (Received September 25, 2018)