

1135-B1-771 **Adam Childers*** (childers@roanoke.edu), 2521 Robin Hood Rd, Roanoke, VA 24014. *Serving up a Winner: Modeling Tennis Match Win Probability.*

Winning a tennis match depends on a player's ability to serve, return serve, and win points that enter open play. In this presentation, we will present a closed-form tennis match win probability model with parameters allow us to understand how each of these facets of the game interact and how they influence the outcome of a match. The model will allow us to explore distinctive styles of play and investigate the sensitivity of match win probability with respect to service winners and open play. Using player data from the ATP, we will use the model to determine the win probability for matches between prominent players. (Received September 14, 2017)