

1145-VR-2907      **Timothy Trujillo\*** (trujillo@shsu.edu), 1905 University Ave, Huntsville, TX 77340.  
*Condorcet's paradox and ultrafilters.* Preliminary report.

Two of the most iconic results of voting theory are Condorcet's paradox and Arrow's impossibility theorem. The purpose of this talk is to place these results in the context of Ramsey theory - the study of collections of sets that are partition regular. We give a new short proof of Arrow's theorem which uses Condorcet's paradox. Along the way the notion of an ultrafilter plays a prominent role. (Received September 25, 2018)