

Date: September 15, 2020

Speaker: John Hester

Title: Combining automated proof calculi

Abstract: The superposition calculus and the tableaux calculus are two of the most powerful and commonly used methods of automatically proving theorems in first order theories in use today. They can also be used with higher order logic, but with some downsides. In the talk, I will first provide a brief introduction to these two systems. I will then describe a method of combining these systems and provide a proof of the soundness and refutational completeness of this combination with examples. Finally, I will discuss my implementation of this rule in my automated theorem prover Etableau, with some experimental results.