

1077-03-1998 **Stephen Flood*** (sflood@nd.edu), Department of Mathematics, 255 Hurley Hall, Notre Dame, IN 46556. *Computing the strength of some combinatorial theorems*. Preliminary report.

Our goal is to classify combinatorial theorems based on the theorems that they can be used to prove. The field of reverse mathematics provides a robust framework for this study. Because there are significant connections between reverse mathematics and computability theory, this classification also helps us understand the computational strength of these combinatorial theorems.

In this talk, we will introduce reverse mathematics and survey the strength of a few noteworthy theorems. We will also discuss new research on the strength of a theorem of Erdős and Galvin which is closely related to infinite Ramsey's theorem. (Received September 21, 2011)