

CCSU
DEPARTMENT OF MATHEMATICAL SCIENCES

COLLOQUIUM

Friday, October 26

2:00 – 3:00 PM

Maria Sanford, Room 101

REVERSE MATHEMATICS AND COMBINATORICS

REED SOLOMON

UNIVERSITY OF CONNECTICUT

Abstract

In mathematics, we sometimes speak of two theorems being equivalent when each can be used to prove the other. For example, the Axiom of Choice is equivalent to Zorn's Lemma. More formally, this equivalence means that the axioms of set theory (without choice) don't suffice to prove the Axiom of Choice, but that if we add either the Axiom of Choice or Zorn's Lemma to set theory, then we can prove the other. Reverse mathematics is a subfield of logic in which one can analyze such potential equivalences and stratify theorems according to their complexity. This talk will be an introduction to this area with examples chosen from Ramsey style combinatorics.

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<http://www.math.ccsu.edu/gotchev/colloquium/>