

Giovanni Solda

Title: Reverse mathematics and combinatorial principles

Abstract: In this talk, I will give a brief survey of some of the key results concerning the reverse mathematical study of combinatorial principles. To do this, we will start with a brief introduction to reverse mathematics, focusing on the so-called big five phenomenon. We will then move to the reverse mathematical analysis of Ramsey's theorem, and its tight relationship with computability theory: in particular, we will focus on the fact that Ramsey's theorem for pairs escapes the big five phenomenon. If time permits, we will then move to study several generalizations of Ramsey's theorem, and mention some reverse mathematical results about them.