Games and logic: an interplay

Interaction is abound among the areas of game theory and logic, which is one of the main focuses of current day research in logic. There are mainly two directions of this interaction: 'logic of games' and 'games in logic'. The former mainly deals with describing and analyzing various game theoretical phenomena in the language of logic, which in turn provides ways to answer some algorithmic questions related to games. The latter topic considers different game theoretic concepts to answer questions in logic. This provides an intuitive game theoretic understanding of various notions in logic.

This talk will focus on the latter issue at an introductory level. We will start with introducing two-person zero-sum games of perfect information, and describe how such games can be used in understanding various concepts in logic.