

abstract

COMPUTER SCIENCE DISCRETE MATH I

Topic:

Speaker:

Affiliation:

Date:

Time/Room:

Is it possible for two intelligent players to communicate meaningfully with each other, without any prior common background? What does it even mean for the two players to understand each other? In addition to being an intriguing question in its own right, we argue that this question also goes to the heart of modern communication infrastructures, where mismatches in protocols between communicating players are a major source of errors.

In this talk, I will describe what complexity theory has to say about such interactions. Most of the talk will focus on how some of the nebulous notions, such as intelligence and understanding, should be defined in concrete settings. We assert that in order to communicate "successfully", the communicating players should be explicit about their goals - what the communication should achieve. We show examples that illustrate that when goals are explicit the communicating players can achieve meaningful communication.

Joint work with Brendan Juba (MIT).