The distinguishing number, a measure of relative symmetry

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007 Kemeny Hall, 4:00 pm
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Abstract

Suppose a group acts on a set X. A coloring of the elements of X using r colors is said to be r-distinguishing if the only group element that preserves the coloring is the identity. The smallest r for which there is an r-distinguishing coloring is called the distinguishing number of X. Distinguishing was introduced about ten years ago by Albertson and Collins in the case when the group is the automorphism group of a graph X. During the past three years there have been some extraordinary advances. This talk will introduce the subject, present some recent highlights, and present several provocative (I hope) open questions.

This talk should be accessible to graduate students.