



The Olivetti Club Presents  
**Ian Smythe**

Friday, March 8  
4:25 pm  
251 Malott

**Classifying Classification**

A common thread throughout modern mathematics is the attempt to classify an interesting collection of mathematical objects up to some notion of equivalence. Examples abound, from isomorphism of groups or other algebraic structures, to homeomorphism or homotopy of topological spaces, to conjugacy of measure preserving group actions, etc. Provided the considered objects are reasonable, we can naturally represent these objects as points in some space, e.g.,  $\mathbb{R}$ . Our desired notion of equivalence is then realized as an equivalence relation on the underlying space. Thus, the study of equivalence relations on  $\mathbb{R}$ , or more general Polish spaces, provides a unified way of understanding and comparing the complexity of such classification problems, as well as establishing profound limits on what objects are reasonably classifiable.

*Please note the change of date, time and room, to accommodate our visiting prospective graduate students.*

*Refreshments will be served at 4:00 pm in the math lounge.*