



The Olivetti Club Presents

## Ian Smythe

Tuesday 4:30 pm

20 October 2015

406 Malott

### **Finite Dictatorships and Infinite Democracies**

Does there exist a reasonable method of voting such that, when presented with three or more alternatives, avoids the undue influence of irrelevant candidates? The famous theorem of Kenneth J. Arrow roughly says that the answer is “no”, or more dramatically, “yes, but only a dictatorship”. As this is a result every mathematician should know, we will present what it says, what it does *not* say, and its proof. We will then consider the analogous question for *infinite* collections of voters. No explicit prerequisites required, though familiarity with a lemma of Zorn may be helpful.

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