

**Undergraduate Math Club  
Winter 2006  
2<sup>nd</sup> floor Nesbitt Common Room  
March 30, 4:10-5:00pm  
(free pizza and pop, as always)**

**Prof. Martin Strauss**  
**The P vs. NP problem**

**Abstract**

Given a graph and a cycle through the graph, it is easy to check whether the cycle visits each vertex exactly once. But how easy is it to find such a cycle if it exists? In general, given a combinatorial problem whose solutions can be checked quickly by computer, can the solutions also be found quickly by computer? In a nutshell, this is the P. vs. NP question. It is an important question because combinatorial problems arise frequently. We discuss this and related questions regarding the nature of efficient computation.