You are invited to join us for a department colloquium:

**Title:** How to solve large combinatorial satisfiability problems with computers but without formal logic

**Speaker:** Robert Cowen, Queens College Mathematics

**Date:** Thursday, March 17, 2011 12:15–1:05

**Location:** Kiely 061

**Abstract:** There are many combinatorial problems that ask whether it is possible to find a solution satisfying certain constraints. Examples include graph coloring, sudoku, ramsey theory, satisfiability of conjunctive normal forms in propositional logic, etc. Traditionally these problems are first translated into logic and are solved using logic techniques. The most successful logic techniques stem from the ideas of Martin Davis and Hilary Putnam in a 1960 paper. This so-called Davis/Putnam method and its variations form the basis of most successful programs in use today. In this talk I shall outline a combinatorial version of the Davis/Putnam method that eliminates the need to first transfer the problem into logic and show its application by solving several small combinatorial satisfiability problems by hand.

For more information and upcoming speakers, visit [http://qc.edu/math/colloq.html](http://qc.edu/math/colloq.html). Contact [chanusa@qc.cuny.edu](mailto:chanusa@qc.cuny.edu) to speak in the colloquium or to be added to the mailing list.