#### **CCSU** DEPARTMENT OF MATHEMATICAL SCIENCES

# COLLOQUIUM

Friday, October 7 2:00 – 3:00 PM Maria Sanford, Room 101

### WHAT IS A CRYSTAL?

## **BENJAMIN SALISBURY**

#### UNIVERSITY OF CONNECTICUT

#### Abstract

The interplay between representation theory and combinatorics has been studied for many years. A more recent development in this connection is the notion of a crystal, due to Kashiwara, which may be represented as a colored, directed graph, with Young tableaux as its vertices. My goal is to give a brief introduction to crystals and explain why they're useful. As an application, we will explain how this Young tableaux realization of the crystal B(infinity) applies to a p-adic integral formula. I will try to make it so that the only prerequisite for this talk is linear algebra.

> *For further information:* <u>gotchevi@ccsu.edu</u> 860-832-2839 http://www.math.ccsu.edu/gotchev/colloquium/