

# ANALYSIS SEMINAR

**Title:** A Differential Topology Proof of the Hartogs Extension Theorem (based on work of Merker and Porten)

M. Range, SUNY at Albany.  
3:00pm, 4/25/07, ES135

## **Abstract:**

I will briefly review some of the techniques that have been used to prove the pioneering 1906 result of Friedrich Hartogs, to the effect that holomorphic functions defined near the connected boundary of a bounded domain in  $C^n$  extend holomorphically to the interior whenever  $n > 1$ . I will then discuss an application of Morse Theory and related techniques to obtain a proof that carries out Hartogs' classical approach in complete generality. This latter part is due to Joel Merker (ENS Paris) and Egmont Porten (Sundvall, Sweden). The talk will be accessible to anyone familiar with basic complex analysis in one variable and some real analysis in  $R^n$ .