

# Topology Seminar

**Srinikanth Iyengar**

of University of Nebraska will be speaking on

Colocalizing subcategories of the  
stable module category of (possibly  
infinite dimensional) modules over a  
finite group

on November 15 at 4:30 in  
MIT Room 2-131

I will describe recent work with Dave Benson and Henning Krause wherein we classify colocalizing subcategories of  $\text{StMod}(kG)$ , for a finite group  $G$ , in the spirit of earlier work by Hopkins, Neeman, and Benson, Carlson, and Rickard on thick subcategories and localizing subcategories in various contexts. A central result in our work is a criteria for the vanishing of a function object,  $\text{Hom}_k(M, N)$ , in  $\text{StMod}(kG)$ , in terms of geometric data (to be precise: support and cosupport) associated to  $M$  and  $N$ , via local cohomology and completion functors on the stable module category.