

# Topology Seminar

**Jay Shah**

of MIT will be speaking on

## Parametrized higher category theory

on May 1 at 4:30 in  
MIT Room 2-131

Parametrized or indexed  $\infty$ -category theory studies  $\infty$ -categories fibered over a given base  $\infty$ -category. This theory can be harnessed for the purposes of equivariant homotopy theory when one specializes to the case where the base is the orbit category of a finite group. In this talk, we present a theory of parametrized homotopy limits and colimits that recovers and extends the Dotto-Moi theory of  $G$ -colimits. We apply this theory to prove that the  $G$ - $\infty$ -category of  $G$ -spaces is freely generated under  $G$ -colimits by the contractible  $G$ -space, thereby affirming a conjecture of Mike Hill.