

Topology Seminar

Irina Bobkova

of Institute for Advanced Study will be speaking on

Invertible $E_2^{hC_4}$ -modules

on December 10 at 4:30 in
MIT Room 2-131

For Morava E -theory E_n and a finite subgroup F of the Morava stabilizer group, the spectrum E_n^{hF} is periodic and the Picard group of the category of modules over the ring spectrum E_n^{hF} contains the cyclic subgroup generated by ΣE_n^{hF} . In most known examples, the Picard group is found to be precisely this cyclic group. However, at chromatic height $n = 2$ and $p = 2$, the Picard group of the category of $E_2^{hC_4}$ -modules is not cyclic and contains an extra element of order 2. I will describe the tools we use to compute this Picard group: a group homomorphism from $RO(C_4)$ to it and the Picard spectral sequence. This talk is based on joint work with Agnes Beaudry, Mike Hill and Vesna Stojanoska.