

# Topology Seminar

## Hood Chatham

of MIT will be speaking on

# An Orientation Map for Height $p - 1$ Real E-theory

on April 6 at 4:30 in  
MIT Room 2-131

The real K-theory spectrum  $KO$  is “almost complex oriented”. Here are a collection of properties that demonstrate this:

- (1)  $KO$  is the  $C_2$  fixed points of a complex oriented cohomology theory  $KU$ .
- (2) Complex oriented cohomology theories have trivial Hurewicz image, whereas  $KO$  has a small Hurewicz image – it detects  $\eta$  and  $\eta^2$ .
- (3) Complex oriented cohomology theories receive a ring map from  $MU$ .  $KO$  receives no ring map from  $MU$  but it receives one from  $MSU$ .
- (4) If  $E$  is a complex orientable cohomology theory, every complex vector bundle  $V$  is  $E$ -orientable. Not every complex vector bundle  $V$  is  $KO$ -orientable, but  $V \oplus V$  and  $V^{\otimes 2}$  are.

Because this is an electronic talk, I will focus on spectral sequence demonstrations using my in-progress spectral sequence software.

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