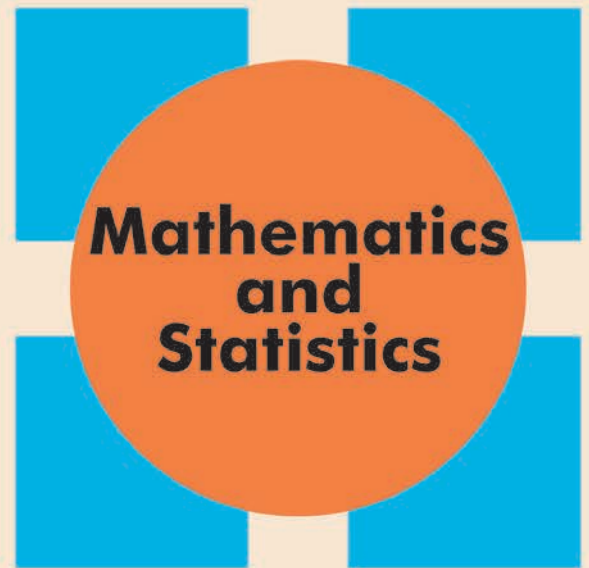


Math Grad Seminar

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Spectra, Generalized cohomology theories, and Formal group laws



Date: October 17, 2016

Time: 12:30 - 1:30 PM

Room: Math Lounge 307.20

Abstract: This talk is aimed at making sense of the following slogans:

- Spectra represent generalized cohomology theories.
- Nice generalized cohomology theories provide formal group laws.
- Formal group laws form a bridge between algebraic topology and number theory.

Spectra are the basic objects of stable homotopy theory. What's important here is that they represent generalized cohomology theories. Furthermore, if the cohomology theory is complex oriented, then we can talk about Chern classes. If one tries to compute the first Chern class $c_1(L_1 \otimes L_2)$ of the tensor product of two line bundles L_1 and L_2 , then he/she is lead to a formal group law. The speaker will try to make this talk a casual story-telling and to avoid being too technical. The audience will stay on the ground for long enough before being lifted up to the sky.