Math 292 - Topology Seminar

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Cellular motivic invariants of $\mathbb{Z}[1/2]$

Abstract:

Report on work in progress, joint with Paul Arne Oestvaer.

A cellular motivic invariant is a special type of functor from the category of commutative rings (or the opposite of schemes, say) to spectra. Examples include algebraic K-theory, motivic cohomology, étale cohomology and algebraic cobordism. Dwyer-Friedlander observed that for 2-adic étale K-theory and certain related invariants, the value on $\mathbb{Z}[1/2]$ can be described in terms of a fiber square involving the values on the real numbers, the complex numbers, and the field with three elements.

I will explain a generalization of this result to arbitrary 2-adic cellular motivic invariants. As an application, we show that $\pi_0$ of the motivic sphere spectrum over $\mathbb{Z}[1/2]$ is given by the Grothendieck-Witt ring of $\mathbb{Z}[1/2]$, up to odd torsion.

Host: Zhouli Xu
Tuesday, January 26, 2021
11:30 AM
Zoom information: Meeting ID: 933 6734 4286 Password: topology