Adam Mickiewicz University
Faculty of Mathematics and Computer Science

GEOMETRY AND TOPOLOGY SEMINAR

13:45 AM, Tuesday, July 3, 2018
B1-37, Collegium Mathematicum

Speaker: Martin Frankland (Osnabruck)

Title: Towards the dual motivic Steenrod algebra in positive characteristic

Abstract:

Several tools from classical topology have useful analogues in motivic homotopy theory. Voevodsky computed the motivic Steenrod algebra and its dual over a base field of characteristic zero. Hoyois, Kelly, and Ostvaer generalized those results to a base field of characteristic p, as long as the coefficients are mod ℓ with $\ell \neq p$. The case $\ell = p$ remains conjectural.

In joint work with Markus Spitzweck, we show that over a base field of characteristic p, the conjectured form of the mod p dual motivic Steenrod algebra is a retract of the actual answer. I will sketch the proof and possible applications. I will also explain how this problem is closely related to the Hopkins-Morel-Hoyois isomorphism, a statement about the algebraic cobordism spectrum MGL.