Topology Seminar

Marc Hoyois

of MIT will be speaking on

The motivic Lefschetz fixed-point theorem

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

Let X be a smooth projective variety over the real numbers and let $f : X \to X$ be a self-map. To X one can associate a real manifold $X(R)$ and a complex manifold $X(C)$. l-adic cohomology gives a purely algebraic description of the Lefschetz number of $f|_{X(C)}$, but the Lefschetz number of $f|_{X(R)}$ is invisible to l-adic cohomology. I will explain how the Lefschetz number of $f|_{X(R)}$ is a motivic homotopy invariant and how a motivic version of the Lefschetz fixed-point formula for f subsumes the topological fixed-point formulas for $f|_{X(C)}$ and $f|_{X(R)}$. I will then consider the situation over an abstract field and formulate an analogous refinement of the l-adic Grothendieck-Lefschetz trace formula.