

Topology Seminar

Marc Hoyois

of MIT will be speaking on

Naive versus motivic 1 -homotopy classes

on September 12 at 4:30 in
MIT Room 2-131

If X and Y are varieties over a field, there are two interesting candidates for the set of homotopy classes of maps from X to Y : the first is simply the quotient of the set of maps by the relation generated by 1 -homotopies, and the second is the set of maps in the 1 -homotopy category of Morel-Voevodsky. They are different in general. The former often carries relevant algebro-geometric information, while the latter is more mysterious but also more computable. Comparing them is therefore an essential step to apply 1 -homotopy theory to concrete classification problems in algebraic geometry. In this talk I will survey existing comparison results as well as some recent work with Aravind Asok and Matthias Wendt.