

Steven Zucker: *Motivic boundaries of Shimura varieties.*

Let X be an incomplete algebraic variety over \mathbb{C} . If Y is an algebraic compactification (completion) of X , then the boundary $\partial_Y X$ underlies a motive over Y . In the case where X is a connected Shimura variety, familiar algebraic compactifications of X are its Baily-Borel Satake compactification X^{BB} and (selected) toroidal compactifications of Mumford et al. The non-algebraic reductive Borel-Serre compactification X^{RBS} of X has asserted its presence for some thirty years now. We show how its cohomology is Voevodsky-motivic over X^{BB} . Moreover, this motivic is a canonical motive associated to X^{BB} . The preceding is joint work with Joseph Ayoub.