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Sin Tsun Edward Fan* (sfan@caltech.edu), CIT 253-37, 1200 E. California Blvd., Pasadena, CA 91125. *On Higher Etale Regulators and Application to Higher Class Field Theory.*

Regulator maps have been a central tool in the study of special values of L-functions. In this talk, we will address a new construction of regulator maps from the Etale motivic cohomology to the Deligne cohomology, which is compatible with Bloch's construction for higher Chow groups. This construction is done on the level of etale complexes, and it facilitates the definition of the etale motivic cohomology with compact support. In particular, an Artin-Verdier type duality is valid, and it provides a natural way to construct the Weil group for general finitely generated fields, which recovers some features of the class formations. We will also show that divisible subgroups of the etale motivic cohomology vanishes under our regulator maps, this provides evidence of the conjectural existence of a duality theory on etale motivic cohomology. (Received September 16, 2014)