John Iskra* (iskrajohnj@gmail.com), PO Box 947, Emory, VA 24327. Use of Locales in Algebraic Geometry. Preliminary report.

In this talk, I will make the case that examining a generalized definition of lisse arrows reveals important differences among categorical models of Algebraic Schemes. In particular, I announce results which, by contrasting the category of locales and the opposite of the category of commutative rings, illuminate both barriers and promising paths on the journey toward a resolution of singularities on algebraic varieties. I am giving this talk at the invitation of Dr. Purna (Received February 15, 2012)