1116-13-1273 **Robert M. Walker*** (robmarsw@umich.edu), 2074 East Hall, Ann Arbor, MI 48109-1043.
Rational singularities and Uniform Symbolic Topologies.

A Noetherian ring R satisfies the uniform symbolic topology property (USTP) if there's an integer $D > 0$ such that the symbolic power $P^{(da)} \subseteq P^a$ for all prime ideals P in R and all integers $a > 0$. In the previous decade, two classes of rings were shown to satisfy the USTP: regular rings of finite type over a field (the Ein-Lazarsfeld-Smith theorem); and reduced isolated singularities that either are F-finite and contain a field of positive characteristic, or are essentially of finite type over a field of characteristic zero (Huneke-Katz-Validashti). In contrast with the regular case, however, the proof in the isolated singularity case is nonconstructive, confirming that a D exists without giving an explicit, effective bound. In this talk, we explain how to find explicit multipliers D for a large class of algebro-geometric surface singularities R (e.g., toric, du Val (ADE)). By reinterpreting classical results of Lipman on rational singularities, we also deduce that all two-dimensional regular rings satisfy the USTP with $D = 1$, partially extending the Ein-Lazarsfeld-Smith theorem to mixed characteristic. (Received September 18, 2015)