Liang Xiao* (lxiao@math.uchicago.edu), 5734 South University Ave, Eckhart 312, Chicago, IL 60637
606375418. Computing log-characteristic cycles using ramification theory.
There is an analogy among vector bundles with integrable connections, overconvergent F-isocrystals, and lisse l-adic sheaves. Given one of the objects, the property of being clean says that the ramification is controlled by the ramification along all generic points of the ramified divisors. In this case, one expects that the Euler characteristics may be expressed in terms of (subsidiary) Swan conductors; and (in first two cases) the log-characteristic cycles may be described in terms of refined Swan conductors. I will explain the proof of this in the vector bundle case and report on the recent progress on the overconvergent F-isocrystal case if time is permitted. (Received January 11, 2011)