Mathias Schulze* (mschulze@math.okstate.edu), Oklahoma State University, Department of Mathematics, Stillwater, OK 74078. Free divisors, adjoint divisors, and partial normalizations.
Free divisors occur naturally as discriminants in singularity theory. Understanding how they are built from components is one of the fundamental questions. For instance, Terao's conjecture states that freeness is combinatorial for hyperplane arrangements. We describe cases, where a hypersurface becomes free by adding an adjoint divisor. For certain free divisors, our constructions yields a partial normalization, which we can describe explicitly in case of Coxeter arrangements and their discriminants. The presented results are joint work with David Mond and Michel Granger. (Received September 01, 2010)