Title: The logarithmic complex of a (locally homogeneous) divisor

Abstract:

The Liouville form of a complex algebraic manifold \( X \) can be used to define a complex for each Euler homogeneous element \( f \in O_X \) on its domain. The complex relates to the Jacobian ideal and also to \( D \)-modules. It appears to be a resolution and in good circumstances resolves a prime Cohen-Macaulay ideal that arises as the annihilator of \( \text{ann}_D(f^s) \). We discuss applications to Bernstein-Sato polynomials of arrangements.