Dr. Ursula Ludwig (Freiburg)
The Witten complex for algebraic curves with cone-like singularities

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The Witten deformation is an analytical method proposed by Witten which, given a
function
 on a smooth compact Riemannian manifold M, leads to a proof of the Morse inequalities. In this talk we generalise the Witten deformation to singular complex algebraic
curves X with cone-like singularities, and functions on X which we call admissible Morse functions.
They are particular examples of stratified Morse functions in the sense of the theory developed by
Goresky/MacPherson.

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