

Gennadi Henkin: Cauchy-Pompeiu type formulas for \bar{d} on affine algebraic Riemann surfaces and some applications

Abstract: We have obtained the explicit versions and precisions for the Hodge-Riemann decomposition of formes on affine algebraic curve V . The main application consists in the construction of the Faddeev-Green function for Laplacian on V . Basing on this we extend from the case X in \mathbb{C} to the case of bordered Riemann surface X in V the R. Novikov (1988) scheme for the effective reconstruction of conductivity function σ on X through the Dirichlet-to-Neumann mapping on bX for solutions of $d(\sigma d^c U)=0$.