Residue-type indices and holomorphic foliations

ARTURO FERNÁNDEZ-PÉREZ AND ROGÉRIO MOL

Abstract. We investigate residue-type indices for germs of holomorphic folia-
tions in the plane and characterize second type foliations – those not containing
tangent saddle-nodes in the reduction of singularities – by an expression involving
the Baum-Bott, variation and polar excess indices. These local results are applied
in the study of logarithmic foliations on compact complex surfaces.

Mathematics Subject Classification (2010): 32S65 (primary); 37F75 (sec-
ondary).