

Foliations on weighted projective spaces

[Ruben Edwin Lizarbe Monje]

Universidade do Estado do Rio de Janeiro - UERJ;
Instituto de Matemática e Estatística - IME;
ruben.monje@ime.uerj.br

Abstract:

In this work, we study the irreducible components of the space of codimension one foliations with normal degree fixed on n -dimensional weighted projective spaces, $n \geq 3$. We describe two types of irreducible components, one of the pullback type and the other of the rational type.

We also study the space of one-dimensional foliations with negative canonical class \mathbb{Q} on three-dimensional weighted projective spaces. We will see that this type of foliation is a fibration by curves on a weighted projective plane. With this in hand, we classify irreducible components of the space of codimension one foliations with negative canonical \mathbb{Q} -class on certain three-dimensional weighted projective spaces.