

1070-32-249

Enrique Artal, Jose Cogolludo and **Daniel Matei***, Institute of Mathematics "Simion Stoilow", Romanian Academy, P.O. Box 1-764, 014700 Bucharest, Romania. *Characteristic varieties of quasi-projective manifolds and orbifolds.*

We discuss characteristic varieties of quasi-projective manifolds improving on a theorem of Arapura. We show that the irreducible components of such characteristic varieties are either pull-backs of irreducible components of characteristic varieties for orbifold curves, or torsion points. This gives an interpretation for the translated components of the characteristic varieties, and shows that the zero-dimensional components are indeed torsion. The main result is applied to derive obstructions for a group to be the fundamental group of a quasi-projective manifold. (Received February 14, 2011)