

Jorge Vitorio Pereira: **Adjoint dimension of foliations**

The classification of foliated surfaces by Brunella, McQuillan and Mendes carries many similarities with the Enriques-Kodaira classification of surfaces but also many important differences. I will discuss an alternative classification scheme where the role of differential forms along the leaves is replaced by differential forms along the leaves with values in fractional powers of the conormal bundle of the foliation. In this alternative setup one obtains a classification of foliated surfaces closer to the usual Enriques-Kodaira classification. If time permits, I will show how to apply this alternative classification to describe the Zariski closure of the set of foliations which admit a rational first integral of bounded genus in families of foliated surfaces. Joint work with Roberto Svaldi.