Seminário de Álgebra

Group actions on Riemann-Roch space.

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Abstract.

Let G be a group acting on a compact Riemann surface $\mathcal{X}$ and D an effective non-special G-invariant divisor on $\mathcal{X}$. The action of G on $\mathcal{X}$ induces a linear representation $L_G(D)$ of G on the Riemann-Roch space associated to D.

In this talk we present some results on the decomposition of $L_G(D)$ as sum of irreducible complex representations of G. In particular, we give explicit formulae for the multiplicity of each complex irreducible factor. Furthermore, we give many examples on well known families of curves.