Abstract

In this talk, we first explain a connection between the weight in the geometric invariant theory and the height introduced by Cornalba and Harris [CH] and Zhang [Z]. Then we give two applications. First, it provides a converse of Cornalba and Harris’s result, which can be treated as a function field analogue of Zhang’s theorem over number field. In particular, this connection gives a numerical interpretation of the moral stability = positivity that was advocated by Viehweg [Vi]. Second, we relate these to the study the positivity of CM-line bundle introduced by Tian and the determinant line bundle introduced by Donaldson [Do].

References


