CHERN NUMBERS FOR PSEUDO-FREE CIRCLE ACTIONS

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In this talk, we consider the following problem :

Question : Suppose that a unit circle S^1 acts on a compact manifold M and suppose that there are only finitely many exceptional (non-free) orbits. Then how those exceptional orbits are correlated?

We will show that the orders of the isotropy subgroups of exceptional orbits are closely related to the Chern number of the associated line orbi-bundle $E = M \times_{S^1} \mathbb{C}$. Also, we illustrate several applications of our results in various equivariant geometry. This is joint work with Byung Hee An.

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