

Positive Energy Representations and K-Theory

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Abstract

Let G be a compact Lie group. Its loop group LG is the infinite-dimensional space of smooth maps from the circle into G (the group operation is pointwise multiplication). The loop group has a series of representations - the positive energy representations - whose theory very closely parallels the representation theory of the compact group G . I'll try to explain some of these connections, especially as they relate to K-theory, following the approach of Freed, Hopkins and Teleman.