Announcement

Seminar on Deformation Quantization

10. 12. 2021 at 2pm CET

Hybrid Seminar in SE 30 and

`https://uni-wuerzburg.zoom.us/j/92529190594?pwd=WkJvR1o1QUdldUNSSjFJbHB4c0Z0dz09`

Bas Janssens (Delft University of Technology)

Positive energy representations of gauge groups

A projective unitary representation of a gauge group (the group of smooth vertical automorphisms of a principal fibre bundle) is called 'of positive energy' if it admits a compatible representation of the Poincaré group for which the generators of forward timelike translations (the Hamiltonians) have nonnegative spectrum. We show that this (rather natural) condition is remarkably restrictive; it turns out that positive energy representations essentially come from 1-dimensional orbits of the Poincaré group. In particular, if the base manifold is compactified $1 + 1$ dimensional Minkowski space, then positive energy representations can only arise from the conformal boundary. (Joint work with Karl-Hermann Neeb)

Invited by Stefan Waldmann