MP 8: Quanten+Gravitation HV 2

Zeit: Mittwoch 16:30–17:10 Raum: HS 8

Hauptvortrag MP 8.1 Mi 16:30 HS 8

Hawking radiation as a local tunneling process: algebraic QFT viewpoint — •Valter Moretti — Department of Mathematics, Trento University, Povo (Trento), Italy

Some recent results are presented about the local tunnelling interpretation of the black hole radiation from the viewpoint of algebraic quantum field theory in curved spacetime. In particular it will be stressed how the phenomenon is independent from any particular self interaction of the field. The attempt to analyze the phenomenon exploiting the locally covariant renormalization procedure in curved spacetime will be also illustrated. It will be stressed that, at least referring to the toy model of Rindler spacetime, and for the phi^3 model, the black hole radiation survives the appearance of the interaction at one-loop. (Talk partially based upon: V. Moretti, N. Pinamonti, Commun. Math. Phys. 309 (2012) 295-311)