SEMINARIO

Dr. Biagio Cassano

BCAM - Basque Center for Applied Mathematics

Self-adjoint extensions for the Dirac operator with Coulomb-type spherically symmetric potentials.

Abstract: We describe all the self-adjoint realizations of the Dirac operator with spherically symmetric perturbations, in 3D. We characterize the self-adjointness in terms of the behavior of the functions of the domain in the origin, exploiting Hardy-type estimates and trace lemmas. Moreover, we link such results with the theory of the boundary triples. Finally, we describe the distinguished extension. This is a work in collaboration with Fabio Pizzichillo (BCAM).

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