

Renormalization of vector fields in locally covariant AQFT

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Abstract In a fundamental work, Hollands and Wald characterised finite renormalization of scalar fields. Despite the great importance of this result, they used a very unnatural assumption: the analytic dependence on metric of Wick powers. Recently Khavkine and Moretti elaborated a new proof, based on Peetre-Slovák theorem on the characterization of differential operators, without this unnatural requirement. In this talk I present the natural evolution of this work, discussing the finite renormalization of vector fields.