## QuantFunc2024



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## The quark spectral function and (heavy) quark diffusion coefficents.

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We present our latest results on the quark spectral function in vacuum and at finite temperature, where we use the framework of spectral Dyson-Schwinger equations and a non-trivial but causal and gauge-consistent quark-gluon-vertex based on the respective Slavnov-Taylor identity. We show how the spectral functional approach can be used for the calculation of real-time observables such as the (heavy) quark diffusion coefficient and the computation of bound-state properties at the example of a scalar field in three dimensions.

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