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## Timelike properties of QCD from functional methods

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We investigate timelike correlation functions in QCD via spectral functional renormalisation group and Dyson-Schwinger equations. Within the spectral formulation, direct access to the full complex structure of the theory is obtained. Studying the propagation of non-holomorphicities through the coupled system of DSEs in Yang-Mills theory, we obtain consistency conditions which constrain the analytic structure of possible solutions. We also present spectral functions in the  $\Phi^4$  theory from the spectral renormalization group. Finally, results for QCD transport coefficients are presented, obtained via closed diagrammatic representations in terms of timelike correlation functions.

**Presenter:** HORAK, Jan