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Dyson-Schwinger studies of Yang-Mills vertices at zero and non-vanishing temperatures

Friday, 13 March 2015 11:00 (25 minutes)

Green functions are useful quantities whose applications in quantum chromodynamics range from bound state calculations to investigations of the phase diagram. Obtaining them from functional equations faces the challenge of devising a proper truncation scheme. I will report on recent progress to determine the correlation functions of pure QCD in the vacuum and at non-zero temperature from Dyson-Schwinger equations. Results for two-, three- and four-point functions were obtained that hint at favorable convergence properties of the system. This helps to establish functional equations as a first principles method in QCD.

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