## Non-Perturbative QFT in Euclidean and Minkowski



Contribution ID: 20

Type: Posters

## Lattice computation of the Landau gauge quark propagator at finite temperature

Wednesday 11 September 2019 16:40 (50 minutes)

We report on the computation of the quark propagator at finite temperature in the Landau gauge using quenched gauge configurations. The propagator form factors are computed for various temperatures, above and below the gluon deconfinement temperature  $T_c$ , and for all the Matsubara frequencies. Significant differences are found between the form factores below and above  $T_c$ , which suggest a strong connection between gluon dynamics, the mechanism for chiral symmetry breaking and the deconfinement mechanism. For temperatures above  $T_c$  and for low momenta, our results support also a description of quarks as free quasi-particles. We also report preliminary results concerning the behaviour of the quark propagator in different  $Z_3$  sectors of the SU(3) gauge group.

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Session Classification: Posters