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Type: **Invited plenary talk**

Exploring non-abelian gauge theory with energy-momentum tensor; stress, thermodynamics and correlations

Saturday 4 August 2018 09:30 (30 minutes)

We perform various lattice simulations with the energy-momentum tensor in SU(3) Yang-Mills theory. The energy-momentum tensor defined on the basis of the Yang-Mills gradient flow is used in these analyses. We explore the spatial distribution of the stress tensor in quark-anti-quark system and thermodynamic quantities at nonzero temperature, as well as the correlation functions. Extensions of the analysis to other new observables and full-QCD simulation will also be discussed.

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