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QCD energy-momentum tensor correlators and viscosity

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An accurate lattice determination of the energy-momentum tensor two-point function is now possible in the pure gauge theory due to an efficient algorithm and powerful computing resources. At finite temperature, the temporal correlators are related by Kubo formulas to transport properties of the quark-gluon plasma, namely shear and bulk viscosity. The latter play a central role in interpreting data from heavy ion collisions at RHIC and LHC. The Euclidean correlators can also be confronted with two opposite pictures of the plasma formed at these colliders: the weakly coupled asymptotic-temperature regime, and the strongly coupled regime studied in supersymmetric gauge theories by AdS/CFT methods. Finally, I will discuss the prospects of calculating the correlators in full QCD.