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## Gravitational form factors and pressure distributions for a quark dressed with a gluon

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We study the gravitational form factors (GFFs) and the mechanical properties like the pressure and shear distributions inside a relativistic spin- $\frac{1}{2}$  composite object like a quark dressed with a gluon, using light-front wave functions. Using the symmetric energy-momentum tensor for QCD, we calculate the analytical expression for the four GFFs  $A(q^2)$ ,  $B(q^2)$ ,  $C(q^2)$  and  $\overline{C}(q^2)$  and use them to study the various mechanical properties of the dressed quark state.

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