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## Continuum QCD-studies of Baryon Spectrum and Structure

*Thursday, 16 September 2021 17:10 (20 minutes)*

We present a unified QCD-based description of elastic and transition form factors involving the nucleon and its resonances. We compare predictions made using a framework built upon a Faddeev equation kernel and interaction vertices that possess QCD-like momentum dependence with results obtained using a confining, symmetry-preserving treatment of a vector  $\otimes$  vector contact-interaction in a widely-used leading-order (rainbow-ladder) truncation of QCD's Dyson-Schwinger equations. This comparison explains that the contact-interaction framework produces hard form factors, curtails some quark orbital angular momentum correlations within a baryon, and suppresses two-loop diagrams in the elastic and transition electromagnetic currents. Such defects are rectified in our QCD-based approach and, by contrasting the results obtained for the same observables in both theoretical schemes, shows those objects which are most sensitive to the momentum dependence of elementary quantities in QCD.

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