

How can the results on  $N^*$  structure affect the exploration of the ground state nucleon and meson structure, and vice versa?

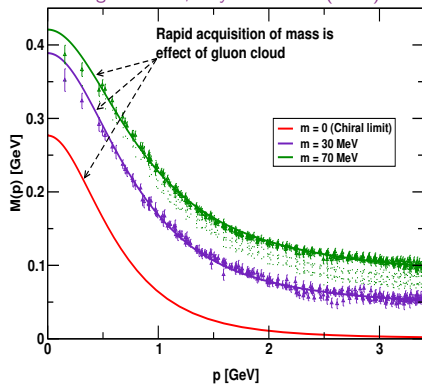
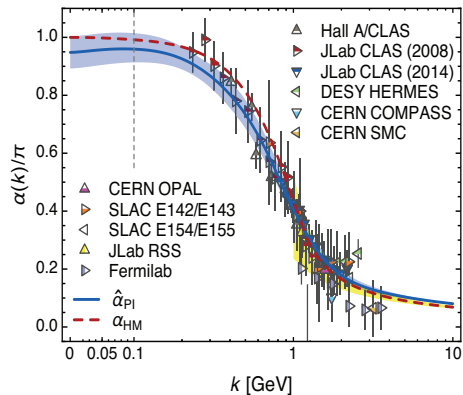
**Strong QCD from Hadron Structure Experiments 2019**

Jefferson Lab, USA, 5-9 November 2019

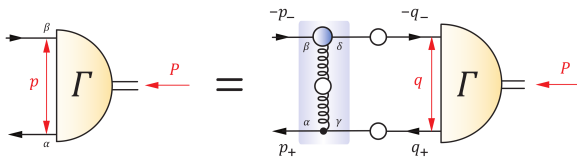
# Non-perturbative QCD: Process-independent effective-charge and quark mass generation

D. Binosi *et al.*, Phys. Rev. D96 (2017) 054026.  
A. Deur *et al.*, Prog. Part. Nucl. Phys. 90 (2016) 1-74.

M.S. Bhagwat *et al.*, Phys.Rev. C68 (2003) 015203

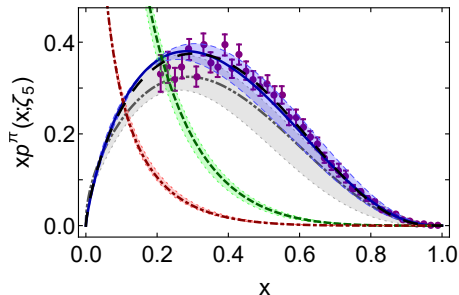
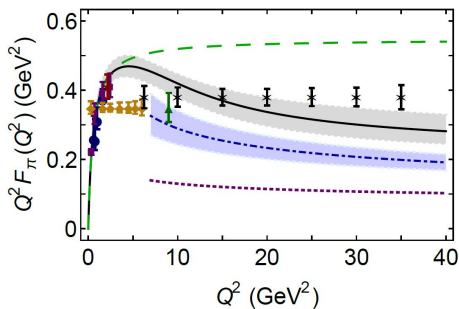


10 years of gauge sector studies confirming 20 years of quark dynamics studies !



Form Factor

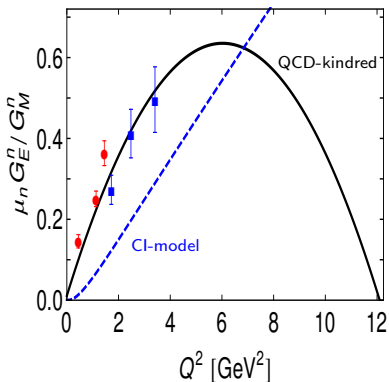
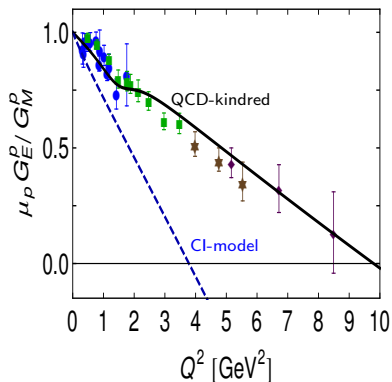
PDF



A.C. Aguilar *et al.*, *Eur. Phys. J. A* 55 (2019) 190

## EM form Factors of the proton and neutron:

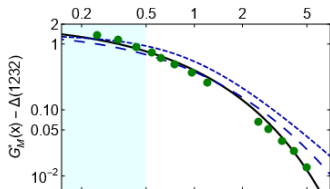
see J. Segovia talk and J. Segovia *et al.*, *Few Body Syst.* 55 (2014) 1185-1222



The existence and location of a zero crossing is a consequence of the underlying dynamics of QCD.

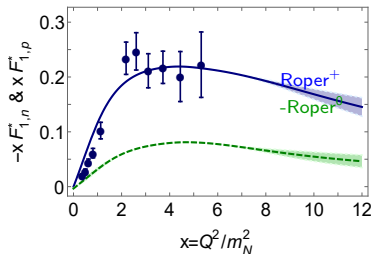
## Transition FFs of the $\Delta$

Y. Lu *et al.*, Phys.Rev. D100 (2019) no.3, 034001



## Transition FFs of the Roper resonance.

C. Chen *et al.*, Phys. Rev. D99 (2019) 034013



## Nucleon and Roper PDAs:

C. Mezrag *et al.*, Phys. Lett. B783 (2018) 263

