ACHT 2021: Perspectives in Particle, Cosmo- and Astroparticle Theory



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Insights into hadron structure from deeply virtual Compton scattering

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The three-dimensional distribution of quarks and gluons is encoded in terms of the so called generalized parton distributions (GPDs), and the most promising access to these functions is via the process of deeply virtual Compton scattering (DVCS).

To overcome the problem of model bias, which is particularly dangerous in this context, we use the method of neural networks. As two applications, we discus the possibility of measurement of pressure inside the proton, and demonstrate separation of up and down quark distributions, when using both neutron and proton DVCS data.

Primary author: KUMERIČKI, Krešimir (University of Zagreb)

Presenter: KUMERIČKI, Krešimir (University of Zagreb)