Contribution ID: **21** Type: **not specified**

Distribution and fragmentation functions of light and heavy mesons

Wednesday 4 September 2024 10:20 (35 minutes)

A more recent approach to light-front wave functions (LFWF) of hadrons consists, in the case of mesons, of projecting their Bethe-Salpeter wave functions on the light front. The latter is obtained within a functional approach to QCD, solving first the quark gap equation within a chiral-symmetry preserving truncation scheme and then the Bethe-Salpeter equation for pseudoscalar and vector mesons. With the LFWF we derive the meson's parton distribution amplitude (PDA), parton distribution function (PDF) and transverse momentum distribution (TMD) for light mesons, D and B mesons, as well as quarkonia. Last not least, I will present recent progress on the calculation of elementary quark-fragmentation functions and their generalization to jet functions.

Authors: EL-BENNICH, Bruno (Federal University of São Paulo); Prof. SERNA, Fernando (Universidad de Sucre); Prof. KREIN, Gastão (IFT - Universidade Estadual Paulista); CORREIA DA SILVEIRA, Roberto (Universidade Cidade de São Paulo)

Presenter: EL-BENNICH, Bruno (Federal University of São Paulo)