

# Light-Front Quantization and AdS/QCD: An overview

*Thursday, 11 November 2010 10:00 (1:00)*

## Abstract content

I will give an overview of the correspondence between semiclassical gauge theories quantized on the light-front and a dual gravity model in anti-de Sitter (AdS) space. This correspondence – light-front holography – provides an initial approximation to QCD in its strongly coupling regime and leads to a light-front Hamiltonian and relativistic bound-state wave equations in terms of an invariant impact variable which measures the separation of the partons within the hadron at equal light-front time, and determines the off-shell dynamics of the bound state wavefunctions as a function of the invariant mass of the constituents. Light-front holography also allows a precise mapping of transition amplitudes from AdS to physical space-time. In contrast with the usual AdS/QCD framework, the internal structure of hadrons is explicitly introduced and the angular momentum of the constituents plays a key role. I will also discuss how to introduce higher Fock-states in the correspondence, as well as their relevance for the detailed description of the structure of space and time-like form factors.

## Summary

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