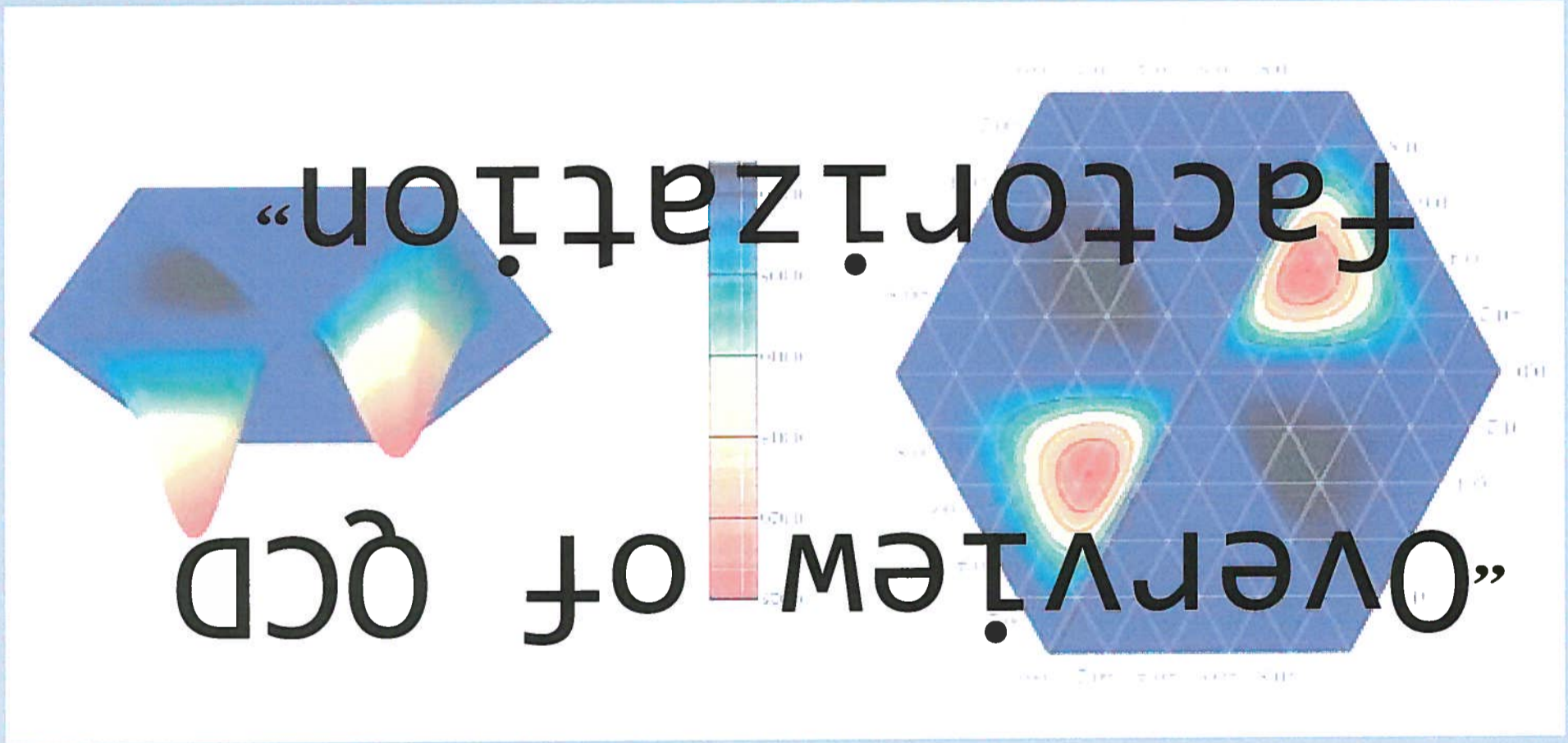


Monday 5 marzo 2012, ore 15:00

Sala Riunioni

Factorization is the fundamental concept in order to apply QCD calculations to hadronic reactions. According to this concept, theoretical study of any hadronic process includes both Perturbative QCD to calculate partonic sub-processes and parton distributions to proceed from partons to hadrons. There are two kinds of Factorization in the literature: Collinear and k_T -factorizations introduced independently of each other. We show that both the k_T - and collinear factorization for DIS structure functions can be obtained by consecutive reductions of the more general factorization of the Compton scattering amplitude. Each of these reductions an approximation valid under certain assumptions. In particular, the transitions to the k_T -factorization is possible when the virtualities of the partons connecting the perturbative and non-perturbative blobs are originated by the transverse momenta. Then, if the unintegrated parton distributions in k_T -factorization have a sharp maximum in k_T , the k_T factorization can be reduced to the collinear factorization. Our analysis makes possible to predict a general form for the fits for parton distributions in k_T -factorization. Besides, we exclude the use of the singular factors $x^{-(a)}$ (with $a > 0$) in the fits representing the initial quark and gluon distributions contributing to the DIS structure functions in the framework of both k_T - and collinear factorizations

Abstract:



terrà un seminario dal titolo :

del Physico-Technical Institute di San Pietroburgo

Prof. Boris ERMOLAEV

II

in collaborazione con l'Università degli Studi di Pavia,
Dipartimento di Fisica Nucleare e Teorica

ISTITUTO NAZIONALE DI FISICA NUCLEARE

Sezione di Pavia

