Light Cone 2015



Contribution ID: 62

Type: Oral contribution

Two-dimensional light-front massless fields and solvable models

Wednesday, 23 September 2015 12:15 (30 minutes)

One of the apparent problems of light front field theory has been a lack of description of two-dimensional massless fields. We show how both the massless scalar and fermion fields can be recovered as massless limits of the two-dimensional massive fields and consistenly quantized without any loss of physical information. Bosonization of the ligh-front (LF) fermion field then

follows in a straightforward manner. Solvable models can also be studied directly in the LF formulation. We discuss the operator solution of the Thirring and Thirring-Wess models including the exact (nonperturbative) form of their correlation functions. A few remarks concerning the LF Schwinger model and the LF version of conformal symmetry conclude our contribution.

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Session Classification: 9.