

# Relevance of implicit parameter dependence in effective models

Modification of Fluctuation-Dissipation Theorem is required within the framework of QCD inspired effective models within mean field approach. The effect of implicit chemical potential dependence of thermodynamic pressure through the mean fields should be considered in order to compute the quark number susceptibility perfectly. Incorporating these dependences, the modification has been done in a semi-analytic method in NJL model and its Polyakov loop extended version.

From a general field theoretic point of view we are able to connect these implicit  $\mu$  dependent terms with the disconnected diagrams of susceptibilities in non-perturbative QCD.

**Primary author:** LAHIRI, Anirban (Bose Institute, Kolkata, India.)

**Co-authors:** Prof. MUSTAFA, Munshi G (Saha Institute of Nuclear Physics, Kolkata.); Dr RAY, Rajarshi (Bose Institute, Kolkata.); Prof. GHOSH, Sanjay (Bose Institute, Kolkata.); Mrs MAJUMDER, Sarbani (Bose Institute, Kolkata, India); Prof. RAHA, Sibaji (Bose Institute, Kolkata.)

**Presenter:** LAHIRI, Anirban (Bose Institute, Kolkata, India.)