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A Review of Functional Renormalization Group approach to the current quark mass dependence of criticality within the Two-Flavor Quark-Meson Model[1] MUNIBA FATIMA[2], AMBER JAMAL[3], IMRAN SIDDIQUI[4], University of Karachi — Increasing the number of hadrons into a finite size nuclei, so as to remove the physical vacuum, causes a singularity to occur, the phenomenon is used to be explain with QCD phase diagram which is a function of temperature, T, and chemical baryon potential, . In this submission, the authors will give a review on the present state of understanding of properties of phase transition region and behavior exhibited during phase transition process from hadronic matter to quark-gluon plasma by the functional renormalization group (FRG) approach to reveal useful information about the criticality in QCD. Our research work is mainly to use FRG within the two-flavor quark meson model to reveal information about criticality in QCD..

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