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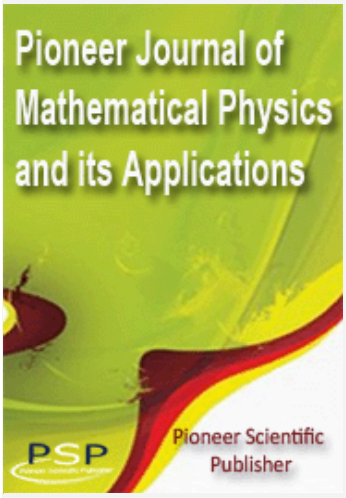

NONPERTURBATIVE SOLUTIONS OF DYSON-SCHWINGER EQUATIONS IN QED_3

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Abstract

The studies of Dyson-Schwinger Equations (DSEs) provide us with insights into nonperturbative phenomenon of quantum field theory. However, DSEs are essentially an infinite set of coupled Green's functions, it's necessary to decouple parts of the equations which are thought of major physical importance to make the solution of these equations possible. Although the results are model-dependent, no qualitative deviations from exact solutions are expected with properly chosen truncation scheme. In this article, a globally convergent numerical method for the solution of the DSEs of QED_3 in Euclidean space is presented.

Keywords and phrases: Dyson-Schwinger Equations, Euclidean space.