

NAMBU-JONA-LASINIO MODEL AND DECONSTRUCTED DIMENSION

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Abstract

The Nambu-Jona-Lasinio model with the mass matrix which appears in a deconstruction model is investigated. We consider two models. In Model A, a mass matrix belonging to a type used in dimensional deconstruction is introduced. In Model B, the four-fermion interaction has a structure of the matrix of the type of dimensional deconstruction. In these models, we find that generation of a dynamical fermion mass spectrum occurs in a strong coupling case.

Keywords and phrases: the Nambu-Jona-Lasinio model, dimensional deconstruction, symmetry breaking.

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