

EIGENVALUES IN GAPS OF PERTURBED PERIODIC DIRAC OPERATORS - NUMERICAL EVIDENCE

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This talk presents a method for the numerical investigation of the distribution of the eigenvalues introduced into a spectral gap of a periodic Dirac system by a perturbation of the type of the angular momentum term. A number of examples illustrate the effectiveness of the method and demonstrate the remarkable accuracy of the strong coupling asymptotic formula even for small values of the perturbation coupling constant. These results also shed some light on the spectrum in the exceptional gap of radially periodic three-dimensional Dirac operators.