Adjoint zero-modes of the Dirac operator as a tool for the understanding of the Yang-Mills vacuum

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We probe gauge vacuum using gluino zero-modes. We present results concerning the analysis of the zero-modes and the lowest eigenvalues of the Dirac operator in the adjoint representation using several gauge backgrounds for SU(2), as Montecarlo configurations, calorons and vortex. To achieve this in the lattice, we use the Neuberger operator.