In this talk I will introduce the so-called Hopfield neural model introduce by John Hopfield in 1984, then present some modifications of the model and their respective applications, then I will introduce the Hopfield neural lattice model with random input in a space of square summable bi-infinite sequence. Existence and uniqueness of solution will be investigated, then it will be shown that the solution generate a random dynamical system. Finally long term behavior will be investigated. (Received September 10, 2018)