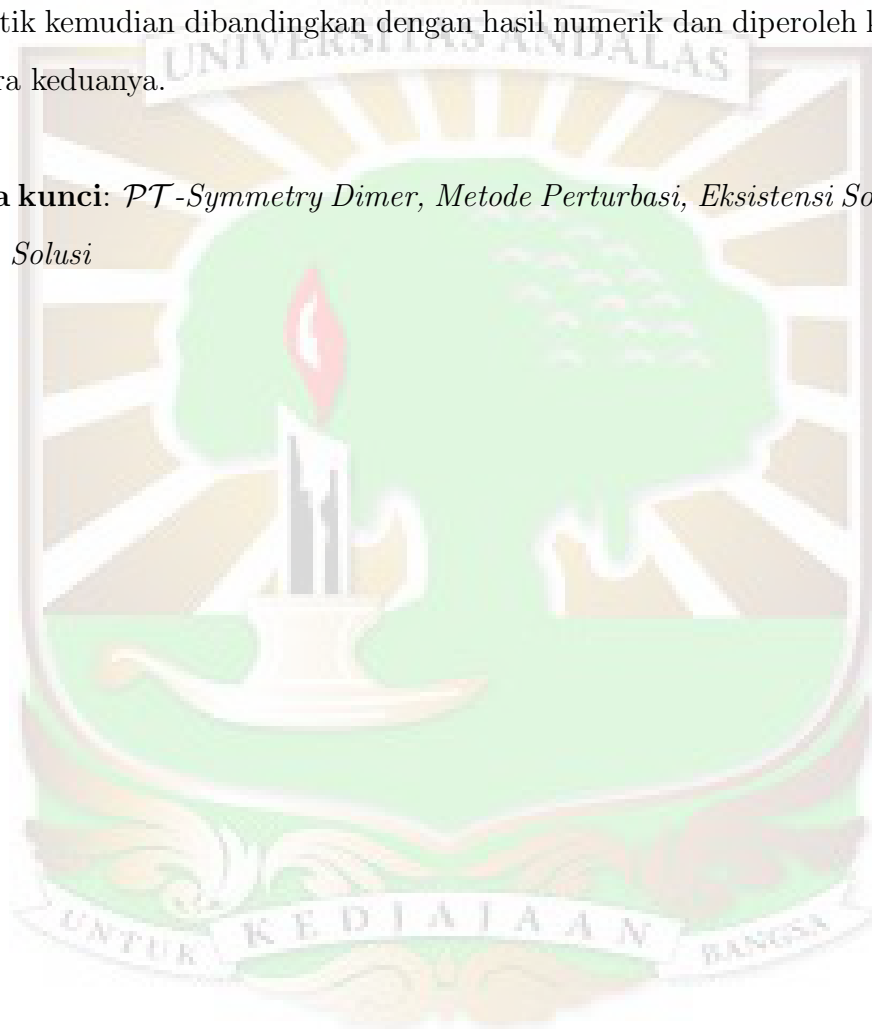


ABSTRAK

Pada tesis ini dikaji sistem \mathcal{PT} -*symmetry multi-dimer* yang terdiri dari kumpulan \mathcal{PT} -*Symmetry Dimer* di bawah pengaruh potensial linear. Eksistensi dan kestabilan solusi stasioner dari sistem tersebut dianalisis dengan menggunakan metode perturbasi. Hasil-hasil kestabilan yang diperoleh secara analitik kemudian dibandingkan dengan hasil numerik dan diperoleh kesesuaian antara keduanya.

Kata kunci: *\mathcal{PT} -Symmetry Dimer, Metode Perturbasi, Eksistensi Solusi, Kestabilan Solusi*



ABSTRACT

In this thesis we consider a \mathcal{PT} -symmetry multi-dimer system, which consists of a collection of \mathcal{PT} -symmetry dimers under the influence of a linear potential. The existence and stability of the stationary solutions are analyzed using a perturbation method. The stability results obtained analytically are then compared with the corresponding numerical results, which shows a good agreement between them.

Keywords: \mathcal{PT} -Symmetry Dimer, Perturbation Method, Existence of Solution, Stability of Solution

