

## عنوان مقاله:

The combinatorial of Artificial Bee Colony algorithm and Bisection method for solving Eigenvalue Problem

## محل انتشار:

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## خلاصه مقاله:

The aim of this paper is to find eigenvalues of square matrix A based on the Artificial Bee Colony algorithm and the Bisection method(BIABC). At first, we obtain initial interval  $[a,b]$  that included all eigenvalues based on Gerschgorin's theorem, and then by using Artificial Bee Colony algorithm(ABC) at this interval to generate initial value for each eigenvalue. The bisection method improves them until the best values of eigenvalues with arbitrary accuracy will be achieved. This enables us to find eigenvalues with arbitrary accuracy without computing the derivative of the characteristic polynomial of the given matrix. We illustrate the proposed method with Some numerical examples

## کلمات کلیدی:

Bisection method, Root-finding method, Eigenvalue problem, Artificial bee colony algorithm

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1634407>

