

## Half-Circle Fuzzy Number Threshold Determination via Swarm Intelligence Method

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**Abstract :** In recent years, many researchers are involved in the field of fuzzy theory. However, there are still a lot of issues to be resolved. Especially on topics related to controller design such as the field of robot, artificial intelligence, and nonlinear systems etc. Besides fuzzy theory, algorithms in swarm intelligence are also a popular field for the researchers. In this paper, a concept of utilizing one of the swarm intelligence method, which is called Bacterial-GA Foraging, to find the stabilized common P matrix for the fuzzy controller system is proposed. An example is given in in the paper, as well.

**Keywords :** half-circle fuzzy numbers, predictions, swarm intelligence, Lyapunov method

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