

## Symbolic approach for the generalized airfoil equation

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### ABSTRACT.

The generalized airfoil equation governs the pressure across an airfoil oscillating in a wind tunnel. In this paper we analyze the problem for an airfoil with a flap, by means of Gene Expression Programming (GEP). We present the main traits of the GEP metaheuristic and then we define its elements in order to be used for integral equations of the first kind. The results obtained by our symbolic approach confirm the suitability of this method for problems modeled by Fredholm first kind integral equations.

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