

# Solving an application problem by differential transform method

ICAAMMP  
2014  
ISTANBUL

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## Abstract

The subject of the presented paper is to apply the differential transform method for solving the system of nonlinear Volterra integro-differential equations which obtain in modeling the problem of biological species living together. Here, the differential transform method has been developed to solve the mentioned problem. To this end, we first give some preliminary results of the differential transform method and then prove some new theorems to show that this method can be easily developed to solve this problem. Finally, some numerical examples are solved by the presented method and compared with the variational iteration method of [1]. The numerical results show the high accuracy of the differential transform method with respect to the variational iteration method.

## References

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