

In this paper, we apply a new approach of the Adomian decomposition method developed by Duan–Rach (DRA) to solve the MHD Jeffery–Hamel flow. A purely analytical solution can be obtained by this approach. This method modifies the Adomian decomposition method (ADM) by evaluating the inverse operator at the boundary conditions directly. The results show a good agreement with numerical method (4th-order Runge–Kutta algorithm) and homotopy analysis method (HAM). The algorithm derived from this approach can be easily implemented.