# On the steady magnetohydrodynamic flows of dilatant fluids

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**Abstract**

In this talk we consider the problem of the steady MHD flow of a non-Newtonian power-law and electrically conducting fluid in presence of an applied magnetic field. The boundary layer equations are solved in similarity form via the Lyapunov energy method, we show that this problem has an infinite number of positive unbounded global solutions. The results have been proved numerically by using a shooting integration algorithm, for different values of the parameters entering into the problem under consideration.

**Keywords:** Asymptotic solution, boundary-layer, degenerate differential equation, global existence, MHD flow, power-law fluid, similarity solutions.

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