MATHEMATICAL AND NUMERICAL RESOLUTION OF THE CONVECTION-DIFFUSION PROBLEM

Diogène Vianney Pongui Ngoma, Germain Nguimbi, Vital Delmas Mabonzo and Narcisse Batangouna

Abstract

The aim of this paper is to solve the convection-diffusion problem of solution $u = u(x, t)$ by the finite difference method, to study the analytical stability in $L^2([0, 1])$, to calculate the method truncation error and to study the convergence of the so called method.