The Ghosh system of differential equations and a solution

Soumadeep Ghosh

Kolkata, India

Abstract

In this paper, I describe the Ghosh system of differential equations and a solution.
The paper ends with "The End"

Introduction

In this paper, I describe the Ghosh system of differential equations and a solution.

The Ghosh system of differential equations

The Ghosh system of differential equations is

$$x'(t) + \left(1 + Xte^{Xt}\right)\left(Ye^{Yt} - y'(t)\right) = 0$$

$$y'(t) + \left(1 + Yt\left(e^{Yt} - 1\right)\right)\left(Xe^{Xt} - x'(t)\right) - Y = 0$$

A solution to the Ghosh system of differential equations

A solution to the Ghosh system of differential equations is

$$x(t) = e^{Xt} + \ln t + a$$

$$y(t) = e^{Yt} + \ln t + b$$

where

a and b are arbitrary constants

The End