

## A CHARACTERIZATION OF THE LINEAR APPROXIMATION FOR THE NONLINEAR BICOMPARTMENTAL POLYNOMIAL SYSTEM: APPLICATION IN PARAMETERS IDENTIFICATION

**B. HEBRI**

Faculty of Mathematics, U.S.T.H.B.BP N ElAlia, Algiers, Algeria

### ABSTRACT

Applying of the linearization method in nonlinear polynomial bicompartamental systems raises a fundamental problem: the linear model obtained is not usually real. The presented work shows by means of the modified distance functional introduced by Y. Cherruault that it is possible to provide a characterization of a real system. A direct application of earlier works allows us to give an approximate identification to the nonlinear system.

**KEYWORDS:** Nonlinear Polynomial, Bicompartamental Systems

