998-05-345 **Niki M Palla*** (`ctsounias@math.ntua.gr`), National Technical University of Athens, 15780 Athens, Greece. *Characteristic Equation of a Graph - Hypergraph Classification - Enumeration of Graphs - Graph Code.* Preliminary report.

In this paper we find, study and research the characteristic equation of the random graph.This equation is the general form of the characteristic equation of a graph.Specific and detailed reference is made to the characteristic equation of bipartite graphs, by generalizing the Knigs theorem, whose algebraic proof is also given. We found the characteristic equation of the random hypergraph H(V,E) and emphasise on projective planes, which are considered a special case of hypergraphs. The method of studying graphs, through the use of (0,1) matrices, relates it to Computer Science. Therefore, this paper is a generalization of graph theory since it both studies a random graph-hypergraph and also associates it with other mathematical areas and Computer Science too. 1* N. Palla, Graph Connectivity by the Adjacency Matrix, Far East J. Appl. Math. 12(3) (2003), 189-225. 2* N. Palla, Isomorphishm and Adjacency-Incidence Matrices, Panamerican Mathematical Journal 11 (2001), Number 4, 39-59. 3* N. Palla, (0,1) Matrices Graphs Computer Science PH.D. THESIS N.T.U.A. (Received March 02, 2004)