

CARPATHIAN J. MATH.
22 (2006), No. 1 - 2, 43 - 47

Omega Polynomial

MIRCEA V. DIUDEA

ABSTRACT. A new counting polynomial, called the "Omega" $\Omega(G, x)$ polynomial, is proposed on the ground of quasi-orthogonal cut "qoc" edge strips in a bipartite lattice. Within a qoc not all cut edges are necessarily orthogonal, meaning not all are pairwise codistant. Two topological indices: CI (Cluj-Ilmenau), eventually equal to the well-known PI index, in planar, bipartite graphs and I_Ω are defined on the newly proposed polynomial and exemplified. Closed analytical formulas for $\Omega(G, x)$ in polyhex tori are given.

FACULTY OF CHEMISTRY AND CHEMICAL ENGINEERING
"BABEȘ-BOLYAI" UNIVERSITY
400028 CLUJ-NAPOCA, ROMANIA
E-mail address: diudea@chem.ubbcluj.ro