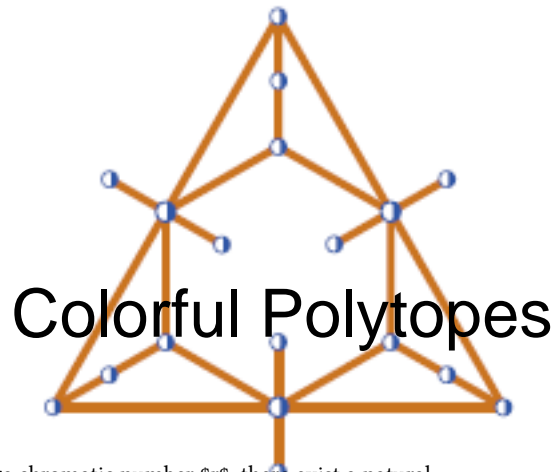


Bled'11 - 7th Slovenian International Conference on Graph Theory

Contribution ID : 22



Content :

Given a r -graph G with edge chromatic number r , there exist a natural construction of an abstract r -Polytope P_G , called the Colorful Polytope, such that the 1- skeleton of such polytope is the graph G . In particular when the graph is a Cayley graph of the symmetric group S_p , P_G is a generalization of the Permutohedron called the Graphicahedron. In this talk we will discuss the construction, and explore some combinatorial symmetry properties of such polytope, analyze transitivity properties of their automorphism groups, discuss some interesting cases which are intimately related to the geometry of the infinite euclidean Coxeter group. Furthermore we will observe an interesting relation of this polytopes with PL-manifolds.

Primary authors : Dr. OLIVEROS, Deborah (Instituto de Matemáticas, UNAM)

Co-authors : Dr. HUBARD, Isabel (Instituto de Matemáticas, UNAM) ; Dr. ARAUJO-PARDO, Gabriela (Instituto de Matemáticas, UNAM) ; Prof. SCHULTE, Egon (Northeastern University, Boston)

Presenter : Dr. OLIVEROS, Deborah (Instituto de Matemáticas, UNAM)

Session classification : --not yet classified--

Track classification : Polytopes and Incidence Geometries

Type : Oral presentation