

**BASES, REORIENTATIONS AND LINEAR PROGRAMMING
IN UNIFORM AND RANK 3 ORIENTED MATROIDS**

Emeric GIOAN

Michel LAS VERGNAS

ERRATA

- page 231 line 2: instead of “acting symmetrically on 1457 with three orbits 1457 23689A BCD” read “acting symmetrically on 1357 with three orbits 1357 24689A BCD”

- page 236 figure 7: in the region corresponding to the basis 136, the dark angle should touch the pseudoline 6 instead of the pseudoline 3.

- page 238: add a reference to “R.O. Winder, Partitions of N-spaces by hyperplanes, SIAM J. Applied Math. 14 (1966), 811-818”

In this paper, R.O. Winder proves that the number of regions of an hyperplane arrangement equals $t(2, 0)$. Independently of this reference, not well known by combinatoricists, several theorems appeared some years later, from a particular case to a generalization. In 1973, R. Stanley published a combinatorial interpretation of $t(1 - \lambda, 0)$ in a graph for $\lambda = -1, -2, \dots$. For $\lambda = -1$, we get that the number of acyclic orientations of a graph equals $t(2, 0)$, a particular case of Winder’s result. Some generalizations of Stanley’s theorem appeared two years later (1975): by T. Zaslavsky in real hyperplane arrangements (hence rediscovering Winder’s result), and by M. Las Vergnas in acyclic reorientations of oriented matroids (result equivalent to a generalization of Winder’s result to pseudohyperplane arrangements).

UPDATE

- The affiliation of Emeric Gioan is now *CNRS (LIRMM, 161 rue Ada 34000 Montpellier) France*, with email address: *Emeric.Gioan@lirmm.fr*.