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Art Duval* (artduval@math.utep.edu) and **Ghodratollah Aalipour**
(aalipour.ghodratollah@gmail.com). *Weighted spanning tree enumerators of complete colorful complexes*. Preliminary report.

A complete colorful complex on r colors is an $(r - 1)$ -dimensional simplicial complex whose vertices are partitioned into r disjoint color classes, and whose facets are all the sets (of size r) containing exactly one vertex of each color. Adin enumerated the k -dimensional spanning trees of complete colorful complexes for all $k \leq r$, and Ehrenborg and van Willigenburg counted weighted spanning trees of complete bipartite graphs ($r = 2$). We find a factorization of a weighted enumeration of top-dimensional spanning trees of complete colorful complexes on $r = 3$ and $r = 4$ colors, and we conjecture our technique will extend to all r . The proof relies on the simplicial Matrix-Tree Theorem, and identification of factors, as in Martin and Reiner. (Received December 04, 2012)