

# JANET'S ALGORITHM

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ABSTRACT. We have introduced the Janet's algorithm for the Stanley decomposition of a monomial ideal  $I \subset S = K[x_1, \dots, x_n]$  and prove that Janet's algorithm gives the squarefree Stanley decomposition of  $S/I$  for a squarefree monomial ideal  $I$ . We have also shown that the Janet's algorithm gives a partition of a simplicial complex.

*Key words* : Stanley decomposition, squarefree Stanley decomposition, partition of a simplicial complex.

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