Peter's question

January-22-13
9:01 AM

Dotsenko:

$t_n = \langle t^{ij} \rangle / [t^{ij}, t^{kl}] = 0$

$[t^{ij}, t^{ik} + t^{jk}] = 0$

$S_n \circlearrowright$ character? decomposition?

The answer for the Koszul dual is in a paper by Felder-Veselov:

Coxeter group actions on the complement of hyperplanes and special involutions

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We consider both standard and twisted action of a (real) Coxeter group G on the complement M_G to the complexified reflection hyperplanes by combining the reflections with complex conjugation. We introduce a natural geometric class of special involutions in G and give explicit formulae which describe both actions on the total cohomology H(M_G,C) in terms of these involutions. As a corollary we prove that the corresponding twisted representation is regular only for the symmetric group S_n, the Weyl groups of type D_{2m+1}, E_6 and dihedral groups I_2 (2k+1) and that the standard action has no anti-invariants. We discuss also the relations with the cohomology of generalised braid groups.