

”Vertex algebras associated with hypertoric varieties” by Toshiro Kuwabara (Tsukuba U)

Hypertoric varieties are known as an example of conical symplectic singularities and their resolutions. Using BRST reduction, we construct a sheaf of (\hbar -adic) vertex algebras over a family of Poisson deformations of a hypertoric variety. A conformal vector is constructed explicitly, and we obtain a vertex operator algebra as a vertex algebra of global sections.

As certain special cases, the construction gives localization of affine W -algebras of subregular type A of level $-N+1$, and one of simple affine VOA of type A of level -1 .

Summary