

## **A construction of the affine VW supercategory**

Mee Seong Im, United States Military Academy

A construction of the affine VW supercategory arose from our study of the representation theory of periplectic Lie superalgebras  $\mathfrak{p}(n)$ . Letting  $V$  to be a superspace with  $\mathbb{Z}/2\mathbb{Z}$ -grading and  $M$  to be a  $\mathfrak{p}(n)$ -module, we construct a super version of the degenerate BMW algebra in the process of examining higher Schur-Weyl duality for the tensor product of  $M$  with finitely-many copies of  $V$ . I will discuss affine VW superalgebras and their center, and the affine VW supercategory and its connection to Brauer supercategory. While giving examples throughout my talk with plenty of diagrams, I will discuss how computer-aided research advances this area of representation theory. This is joint with M. Balagovic, Z. Daugherty, I. Entova-Aizenbud, I. Halacheva, J. Hennig, G. Letzter, E. Norton, V. Serganova, and C. Stroppel.