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タイトル TITLE	Structure and representation theory of some affine $\mathcal{W}$ -algebras		
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In the study of conformal field theory and string theory, vertex operator algebras (VOAs) play a fundamental role as the mathematical foundation for the concept of chiral algebras. One of the most important families of vertex algebras are affine vertex algebras and their associated  $\mathcal{W}$ -algebras, which are connected to various aspects of geometry and physics. Recently, the affine  $\mathcal{W}$ -algebras associated to the subregular nilpotent element  $\mathcal{W}^k(\mathfrak{g}, f_{sub})$  have attracted a lot of interest. In this talk I will introduce some basic notions in the theory of vertex algebras and present some recent results about the structure and representation theory of certain subregular  $\mathcal{W}$ -algebras at integer levels.