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Drazen Adamovic* (adamovic@math.hr), Department of Mathematics, University of Zagreb, Bijenicka 30, 10 000 Zagreb, Croatia. *On Wakimoto and Whittaker modules for affine vertex algebras.*

We shall present recent results on classification and explicit realizations of Wakimoto and Whittaker modules for affine Lie algebras by using vertex-algebraic techniques. First we shall present a result on classification of irreducible Wakimoto modules in principal gradation for the affine Lie algebra $A_1^{(1)}$ (obtain in a joint work with N. Jing and K. Misra) and discuss some combinatorial applications. Next we will consider Whittaker modules for affine Lie algebras as modules for universal affine vertex algebras. We present a result on classification of Whittaker modules for $A_1^{(1)}$ (joint work with K. Zhao and R. Lu). Some possible generalizations will be also discussed. (Received September 08, 2016)