Affine Root Supersystems and their Generalizations.

Following the interest of physicists in the study of supersymmetries, in 1997, V. Kac introduced Lie superalgebras. He studied the super version of contragredient Lie algebras and classified the finite dimensional simple ones. Then, in 1986, J. Van de Lour classified affine Lie superalgebras, i.e., those contragredinet Lie superalgebras which are not finite dimensional but of finite growth. Here, we first recall affine Lie superalgebras and elaborate their root systems. We call these root systems affine root supersystems. Affine root supersystems are examples of extended affine root supersystems which appear naturally in the study of generalizations of affine Lie superalgebras. We give a complete description of extended affine root supersystems.