In this talk, we calculate $RO(C_2)$-graded cohomology of $C_2$-equivariant Eilenberg-Mac Lane spaces. Then, I will describe $C_2$-equivariant lambda algebra. These are used to give the relation between equivariant lambda algebra and equivariant Adams resolution and equivariant unstable Adams spectral sequence, which are defined in author's dissertation. (Received August 20, 2018)