1062-17-98   **Young Jo Kwak*** (`kwaky@colorado.edu`), 491 Geneva St, Aurora, CO 80010. *Automorphisms of some combinatorially defined Lie algebras over GF(2).*

We describe the automorphism group of an arbitrary member, $K(n)$, from an infinite family of Lie algebras defined over the two element field, $GF(2)$. The algebra $K(n)$ has a vector space basis consisting of the edges and vertices of the complete graph on n vertices, while the Lie bracket on $K(n)$ is defined to encode the incidence relation of the graph. The main result is that, when $n \neq 3$, the automorphism group of $K(n)$ is isomorphic to the group of affine transformations of n-dimensional space over $GF(2)$ which can be written in the form $d + Px$ with P orthogonal.

Also, we establish that the 14-dimensional simple Bi-Zassenhaus algebra $B(2, 1)$ is not isomorphic to the 14-dimensional simple algebra $G(4)$ discovered by Kaplansky, thereby answering a question of Jurman. (Received July 30, 2010)

1