1125-VN-2440 **Elizabeth M. Reid*** (`emreid2@buffalo.edu`), 101 Hendricks Blvd, Amherst, NY 14226, and **Thomas Cusick**. *Affine equivalence classes of 2-rotation symmetric cubic Boolean functions.*

A Boolean function in n variables is 2-rotation symmetric if it is invariant under even powers of the cyclic permutation $\rho(x_1, \ldots, x_n) = (x_2, \ldots, x_n, x_1)$ of the variables, but not under the first power. We call such a function a 2-function. A 2-function is said to be monomial rotation symmetric (MRS) if it is generated by applying powers of ρ^2 to a single monomial. In 2014 Cusick and Johns developed the theory of cubic MRS 2-functions in $2n$ variables generated by a monomial $x_1 x_r x_s$ with $1 < r < s$ and r and s not both odd. They gave a complete description of the affine equivalence classes for these functions. Here, we develop the theory further by determining the smallest group that acts on the set of all these cubic MRS functions to give the affine equivalence classes. (Received September 20, 2016)