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Erich Christian Jauch* (ecjauch@iastate.edu), 396 Carver Hall, 411 Morrill Road, Ames, IA 50011. *An Alternating Analogue of $U(\mathfrak{gl}_n)$ and Its Representations*. Preliminary report.

The universal enveloping algebra of a Lie algebra \mathfrak{g} is of utmost importance when studying representations of \mathfrak{g} . In 2010, V. Futorny and S. Ovsienko gave a realization of $U(\mathfrak{gl}_n)$ as a subalgebra of the ring of invariants of a certain noncommutative ring with respect to the action of $S_1 \times S_2 \times \cdots \times S_n$ where S_j is the symmetric group on j variables. With some connections to Galois Theory, an interesting question is what would a similar object be in the invariant ring with respect to a product of Alternating groups? We will discuss such an object and some results about its representations. (Received January 24, 2019)