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Briana Foster-Greenwood* (brianaf@cpp.edu) and **Cathy Kriloff** (krilcath@isu.edu). *Lie Orbifold Algebras for Doubled Reflection Representations of the Symmetric Group.*

Lie orbifold algebras were introduced by Shepler and Witherspoon to complete the analogy “Weyl algebras are to symplectic reflection algebras as universal enveloping algebras are to what?” In particular, Lie orbifold algebras are deformations whose parameters specialize to yield universal enveloping algebras extended by groups. By analyzing PBW conditions, we classify Lie orbifold algebras arising as deformations of the skew group algebra $S(V)\#S_n$ where the symmetric group S_n acts on the vector space V by a doubled reflection representation. The algebras in this classification provide a generalization of rational Cherednik algebras in type A which have enjoyed much attention in connection with representation theory, physics, and algebraic geometry. (Received September 15, 2019)