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**Sharon M Frechette\*** ([sfrechet@holycross.edu](mailto:sfrechet@holycross.edu)), **Julia Gordon** and **Lance Robson**.

*Orbital Integrals and Shalika Germs for  $\mathfrak{sl}_n$  and  $\mathfrak{sp}_{2n}$ .* Preliminary report.

Shalika germs were introduced as a tool for studying orbital integrals, objects that play a large role in harmonic analysis on  $p$ -adic groups. The Shalika germ expansion expresses regular semisimple orbital integrals in terms of nilpotent ones, in a neighborhood of the origin. Exact values of Shalika germs elude computation, except for those of a few Lie algebras of small rank. We prove that Shalika germs on  $\mathfrak{sl}_n$  and  $\mathfrak{sp}_{2n}$  belong to a class of motivic functions defined by Cluckers and Loeser by means of a first-order language of logic (Denef-Pas language). The proof involves Nevins' combinatorial matching between two parametrizations of nilpotent orbits: a parametrization involving partitions, and DeBacker's parametrization arising from the Bruhat-Tits building. As a result, we establish bounds on the Shalika germs that are uniform in  $p$ . This is joint work with Julia Gordon and Lance Robson. (Received September 15, 2016)