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Stephen Doty* (doty@math.luc.edu). *Generators and relations for Schur algebras*. Preliminary report.

(Joint with Tony Giaquinto) We give a presentation of the Schur algebras and their quantum analogues by generators and relations, in fact a presentation which is compatible with Serre's presentation of the universal enveloping algebra of a simple Lie algebra. In the process we find a new basis for the Schur algebras, a truncated form of the usual PBW basis. We also locate the integral Schur algebra within the presented algebra as the analogue of Kostant's \mathbf{Z} -form, and show that it has an integral basis which is a truncated version of Kostant's basis. (Received October 04, 2000)