1014-20-764   **Martin W Lorenz*** (`lorenz@temple.edu`), Department of Mathematics, Temple University, Philadelphia, PA 19122. *Orders of finite groups of matrices.* Preliminary report.

We present a new proof of a theorem of Schur's from 1905 determining the least common multiple of the orders of all finite groups of complex $n \times n$-matrices having trace in some fixed number field. The basic method of proof, except for details, goes back to Minkowski and proceeds by reduction to the case of finite fields. This is joint work with Bob Guralnick. (Received September 23, 2005)